COMDIAL®

Corporate Office DX
Installation Manual

DX-80

Corporate Office DX
Installation Manual

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TABLE OF CONTENTS

Chapter 1. System Overview

1.1 Identifying the Corporate Office DX 5

1.2 What Does the DX-80 Corporate Office DX Voice Mail Do? 5

1.2.1 What is an Automated Attendant? 5

1.2.2 What is Voice Mail? 6

1.3 Understanding the Product Design 6

1.3.1 Understanding Routing Boxes 7

Chapter 2. Understanding Integration Requirements

2.1 Required Integration Hardware 9

2.2 Required Integration Software 9

2.3 Phone System Hardware Requirements 9

2.4 Supporting Documentation 10

2.5 Corporate Office Board Versions 10

2.6 Layout of DX-80 Corporate Office Board (Flash) 11

2.7 Corporate Office DX (Hard Drive) 13

2.8 Describing the Connectors, Ports, and Jumpers 14

2.9 Installing the Corporate Office DX Board 16

2.10 Upgrading the Corporate Office DX 17

2.10.1 Adding a Four-Port Expansion Module 17

2.10.2 Upgrading the Corporate Office DX CompactFlash® Card 18

Chapter 3. Communicating with the System

3.1 About Keylink DX V1.0 19

3.2 Configuring for a Direct Connection 20

3.2.1 Communicating with Keylink 20

3.2.2 Configuration Options on the Corporate Office DX 22

3.2.3 Using the File Transfer Feature of KeyLink 25

3.2.3.1 Transferring a File from the Corporate Office DX to a PC 25

3.2.3.2 Transferring a File from a PC to the Corporate Office DX 26

3.3 Communicating with PC-DBA 27

3.4 Configuring for a Remote Connection 28
3.5 Reconfiguring for Local Access 30
3.6 Backing Up the System 33
3.6.1 Copying the Database and Setup Files 34
3.6.2 Copying Greetings, Names, and Messages 35
3.7 Restoring Files on the Corporate Office DX 36
3.7.1 Restoring the Database and Setup Files 36
3.7.2 Restoring Names, Greetings, and Messages 36

Chapter 4. Understanding Supported Features

4.1 Feature Comparison Matrix 39
4.2 Automatic Mailbox Login 40
4.3 Call Forward to Personal Greeting 40
4.4 Recording a Call 41
4.5 Transfer to Voice Mail 41
4.6 Caller ID 41
4.7 UCD Integration 41
4.8 Call Forwarding 43
4.9 Call Transfer Types 43
4.10 Time/Day Announcements 44
4.11 Call Queuing 44
4.12 Multilingual Capability 44
4.13 Optional Features 44

Chapter 5. Configuring the Phone System Programming

5.1 Related Programming 45
5.2 Configuring the DX-80 for Voice Mail 46
5.3 Programming via the DET (Digital Extension Terminal) 46
5.3.1 Program Extension Port Type 46
5.3.2 Program UCD Group Members 47
5.3.3 Program Voice Mail Hunt Group 47
5.3.4 Program VM Tables 47

5.3.5 Program No Answer Call Forward 50
5.4 Programming the DX-80 via PC-DBA 52
5.4.1 Program Extension Port Type 52
5.4.2 Program UCD Group Members 54
5.4.3 Program Voice Mail Hunt Group and Call Handling Digits 56
5.4.4 Program Predefined Call Forward Modes 57
5.4.5 Program Voice Mail Dialing Ratio 58
5.4.6 Program Predefined Forward Time 58
5.4.7 Program Automatic CO Line Ringing Modes 60
5.4.8 Program CO Line Answering Position 61

Chapter 6. Corporate Office DX Setup

6.1 Default Database Structure Overview 63
6.2 Available Setup Technique 65
6.3 Preparing for Setup 65
6.4 Collecting Necessary Customer Information 66
6.5 Setting up the System 70
6.5.1 Specifying System Information 71
6.5.1.1 Accessing System Information Screens 71
6.5.1.2 Setting Up the General Information Screen 71
6.5.1.3 Setting Up the Line Information Screen 72
6.5.1.4 Setting Up the Business Hours Screen 72
6.5.1.5 Setting Up the Call Transfer Screen 72
6.5.1.6 Setting Up the Class of Service Screen 73
6.5.2 Specifying Box Information 78
6.5.2.1 What Is a Box? 78
6.5.2.2 Understanding Routing Box 800, 801, and 821 78
6.5.2.3 Accessing Box Information Screens 79
6.5.2.4 Setting Up Single Digit Call Routing 79
6.5.2.5 Setting Up Prototype Mailbox 9994 80
6.5.2.6 Creating Subscriber Mailboxes 82
6.5.2.7 Customizing Subscriber Mailboxes 82
6.5.2.8 Customizing the System Supervisor Mailbox 89
6.5.2.9 Recording Routing Box Greetings 90
6.6 Test Procedures 91
6.6.1 Calling into your voice mailbox 91
6.6.2 Transferring a Call to Any User's Voice Mailbox 91
6.6.3 Retrieving Messages From Your Voice Mailbox 92

Appendix A. Setting Up the System with Teleparameter

A.1 Using Teleparameter to Set Up a New System 93
A.1.1 Adjusting System Information 93
A.1.1.1 Adjusting Routing Box Information 94
A.1.1.2 Creating and Adjusting Mailbox Information 94
A.1.1.3 Creating Other Box Types and Adjusting Information 95
A.1.2 Teleparameter Table Values 95

Appendix B. Customizing the Corporate Office DX Configuration

B.1 Setting the Defaults 121
B.2 Checking System Information Settings 121
B.3 Checking Box Information Settings 122
B.4 Checking the Voice Mail Configuration (VM.CFG) File 123
B.5 Checking the TRANS.TXT File 124

1. SYSTEM OVERVIEW

1.1 Identifying the Corporate Office DX

This document references two models of the DX-80 In-Skin Voice Mail:

- **7271C**: A flash-based card, this product supports a variable amount of storage depending on the size of the flash card (i.e. 32MB supports 90 minutes of storage). The 7271C also supports a number of advanced features, including Call Forwarding, Call Screening, Time/Day Announcements, and Call Queuing.
- **7270C**: This card hosts a hard-drive with 100 hours of storage and all the features of the 7271C. It also includes an on-board modem enabling remote configuration of both the DX-80 and Voice Mail.

For a side by side comparison of the features, see Section 4.1, *Feature Comparison Matrix*.

1.2 What Does the DX-80 Corporate Office DX Voice Mail Do?

In its simplest form, the Corporate Office DX Voice Mail acts like a telephone receptionist. The system answers incoming calls and transfers them to the appropriate extension. If the called extension is not available (busy or no answer), the system offers to take a message or try an alternative extension.

Voice Mail functionality includes:

- Automated attendant features
- Voice mail features

These two functions work together to provide smooth call coverage for your application.

1.2.1 WHAT IS AN AUTOMATED ATTENDANT?

The Voice Mail automated attendant features perform the tasks of a live attendant. The following table illustrates how.

Live Attendant	Corporate Office DX Automated Attendant
Answers an incoming call by lifting telephone.	Answers an incoming call by going “off-hook.”
Greets the caller with *"Welcome to [XYZ Company]."*	Greets the caller by playing a pre-recorded greeting, *"Welcome to [XYZ Company]."*
Asks to whom the caller wishes to speak.	Plays a pre-recorded greeting that prompts the caller to either dial the extension of the party they are trying to reach or choose from a list of voiced options to route their call to a specific department or group.
Listens to the caller's response.	Listens to the digits dialed by the caller.
Says "Please hold."	Plays a pre-record phrase *"Please hold..."*

Live Attendant (Continued)	Corporate Office DX Automated Attendant
Calls the required extension, by hook-flashing and dialing the extension number.	Calls the required extension, by hook-flashing and dialing the extension number.
Listens for busy tone, ring tone, answer, etc.	Listens for busy tone, ring tone, answer, etc.
If the extension is busy, offers to let the caller hold. If the extension does not answer, offers to take a message or try another extension.	If the extension is busy, plays a pre-recorded prompt, offering the option to hold. If the extension does not answer, plays a pre-recorded prompt offering to take a message or try another extension.

1.2.2 WHAT IS VOICE MAIL?

The term “voice mail” refers to systems that can record a voice message and treat it like a mail message. In a typical office environment, the live attendant takes a message from a caller and writes it down on a piece of paper. The attendant then places the slip in the recipient’s in-box or “mailbox.” The box owner then retrieves and reads the message placed in the box.

In contrast, the DX-80 Voice Mail records a message from a caller and places it in a voice mailbox. The mailbox owner can later retrieve the message by calling into the Voice Mail and listening to the recording. The table below compares how the Voice Mail processes voice messages compared to a live attendant.

Live Attendant	Corporate Office DX
Attendant listens as the caller dictates his/her message, writing it down on a piece of paper.	The Voice Mail records the message as the caller speaks.
Attendant places the message slip in a mailbox belonging to the recipient.	The Voice Mail stores the voice message electronically in the recipient’s voice mailbox.
Attendant dials code to turn on message waiting lamp on recipient's telephone.	The Voice Mail dials code to turn on the message waiting lamp on recipient's telephone.
Recipient sees message waiting lamp is on, and retrieves message slips from message mailbox.	Recipient sees message waiting lamp is on and dials the Voice Mail to retrieve messages.
Recipient reads messages left on message slips.	The Voice Mail plays messages recorded by callers in the voice mailbox.

1.3 Understanding the Product Design

The Voice Mail is designed using the Box concept. A box contains a set of instructions that tell the program what to do with a call it is handling. By setting up the system to send calls to different boxes created on the system, you can have it effectively process calls—including playing certain prompts or greetings to callers, collecting information and messages from callers, and routing calls to certain extensions based on digits dialed by callers.

1.3.1 UNDERSTANDING ROUTING BOXES

Routing boxes are used to answer incoming calls, play a listing of options to callers, and route the call to a specific mailbox based on the digits dialed by the caller. The mailboxes transfer calls to their associated extensions and store messages for system subscribers, and they can be set up to forward calls to another phone or extension number, deliver messages to another phone or pager, play one of 9 prerecorded greetings to callers, screen calls, queue calls when the extension is busy, or record call conversations.

Differences between the DX-80 Corporate Office DX Voice Mail and an External Small Office VP System

There are several key differences between the DX-80 Corporate Office DX Voice Mail and an external Small Office system:

1. The DX-80 has built-in UCD capability. A UCD group can be set up, and calls can be routed to the UCD group without any involvement from the Voice Mail. This is completely separate and distinct from the ACD provided on Voice Mail.

   When a call is sent to a DX-80 UCD group and all agents are busy, the DX-80 will queue the call, waiting for an agent to become available. When an agent becomes available, the DX-80 will send the call to that agent, causing his/her phone to ring. The Voice Mail is not involved at all. (In fact, there does not have to be a Voice Mail on the system.)

   When the DX-80 queues a call while waiting for an agent to become available, the DX-80 can play its music-on-hold to the caller, but this is limited and cannot be modified. However, the DX-80 can conference in a voice mail port to the queued call. The DX-80 rings the voice mail port, sends the Voice Mail some digits to specify which UCD queue the call is in, and lets the Voice Mail play voice messages to the caller while the call is in the DX-80 UCD queue.

   The DX-80 will allow the Voice Mail to remain connected to the call until it sees that a DX-80 UCD agent has become available. As soon as an agent becomes available, the DX-80 will disconnect the Voice Mail and send the call to the agent. The Voice Mail will see that the call has disconnected and will return the voice mail port to idle.

   During the time the Voice Mail is connected to the call, the caller will hear voice messages, and can respond by pressing digits. The Voice Mail implements this by sending the call to a Routing box, which plays the Routing box greeting, waits for digits, and moves to other boxes in the normal manner.

   The simplest example would be a case in which the Voice Mail just provides music on hold. In this case, the Routing box greeting would just be a short piece of music. The field labeled “If no digits dialed” would send the call back to this same Routing box. The “Destination for digit x” for all digits would be set to send the call back to this Routing box. This would cause the Voice Mail to keep playing the greeting (music) over and over.

   Another example would be a case in which you want to allow the caller to hear information about different products while he/she is on hold. The Routing box greeting could be recorded as “While you are holding, to hear about our spring products, press 1, to hear about our summer products, press 2,” etc. The Routing box could route the call to another Routing box, depending on what the caller enters. This new Routing box could offer another menu, a product description, or other information as appropriate.

Finally, to handle the case in which the caller decides not to continue in the DX-80 UCD queue and wants the auto-attendant features to route the call, the caller can tell the Voice Mail this by pressing 7. The Voice Mail determines how to handle the call using this logic: "If the Voice Mail is handling a call in a Routing box and the call came from the DX-80 as a UCD call, and the caller dials 7 and the “Destination for digit 7” is not set to a valid box number, then the Voice Mail will signal (by a double hookflash) to the DX-80 that the DX-80 should remove the call from the UCD queue and relinquish control of the call to the Voice Mail.

The Routing boxes for each UCD group are defined in TRANS.TXT file. By default, they are:

UCD group 1 overflow announcement 1 = 3101

UCD group 1 overflow announcement 2 = 3201

UCD group 1 reroute announcement = 3301

UCD group 2 overflow announcement 1 = 3102

UCD group 2 overflow announcement 2 = 3202

UCD group 2 reroute announcement = 3302

This continues for groups 3 through 5.

2. It is not possible to enable the optional features (Fax, Telemarketing, or Talking Classifieds) on the DX-80 Corporate Office DX Voice Mail.
3. Serial numbers on the DX-80 Corporate Office DX Voice Mail are 10 characters long and begin with 4. They may contain letters as well as numbers.
4. Since the integration parameters for the DX-80 are pre-set on the Corporate Office DX Voice Mail before it leaves the factory, no First Time Setup procedure is necessary.

2. UNDERSTANDING INTEGRATION REQUIREMENTS

2.1 Required Integration Hardware

This integration applies to the DX-80 and the Corporate Office DX Voice Mail board.

2.2 Required Integration Software

The recommended minimum level of firmware for the DX-80 is F32.

2.3 Phone System Hardware Requirements

The Key Service Unit (KSU 1) is shipped in its own protective master carton and contains the following hardware components:

- 1 mounting template
- Standard 408M (Module) equipped with 8 digital extension ports, 4 CO Line ports, and 1 CO Line PFT (Power Failure Transfer) port.
- Standard CPM (Central Processor Module)
- Standard APM4 (Analog Port Module – 4 port)

LED Status

The Corporate Office Flash voice mail board is equipped with an LED to assist users in recognizing the status of the voice mail. The LED indications are::

Status	Description
Off	VM is not running
On-Steady	VM is initializing
On-Flashing	VM is running

2.4 Supporting Documentation

The following Comdial publications are available for reference when configuring the Corporate Office DX Voice Mail Board.

- *DX-80 Techncial Manual, Volume I, Installation & Maintenance*, part number IMI72-001
- *DX-80 Techncial Manual, Volume II, Programming*, part number GCA60-001
- *Corporate Office Technical Manual, Volume I, Installation & Maintenance*, part number IMI66-150
- *Corporate Office Technical Manual, Volume II, Programming*, part number IMI66-151

These documents can be located on the Comdial Customer Care Center website, located at http://comdial.com/ccc.

2.5 Corporate Office Board Versions

There are two possible versions of the Corporate Office Voice Board:

- DX-80 VM
- DX-80 VMII

The basic difference between these two boards consist of the placement of COM1 and COM2. To determine which board your system has, locate the DB9 connector for COM2. If this connector is on the upper right corner of the board, the board is a DX-80 VM. If the connector is on the upper left corner of the board, the board is a DX-80 VMII.

In the following sections, connectors are identifed for both the DX-80 VM and the DX-80 VMII.

Functionality between the two boards is identical.

2.6 Layout of DX-80 Corporate Office Board (Flash)

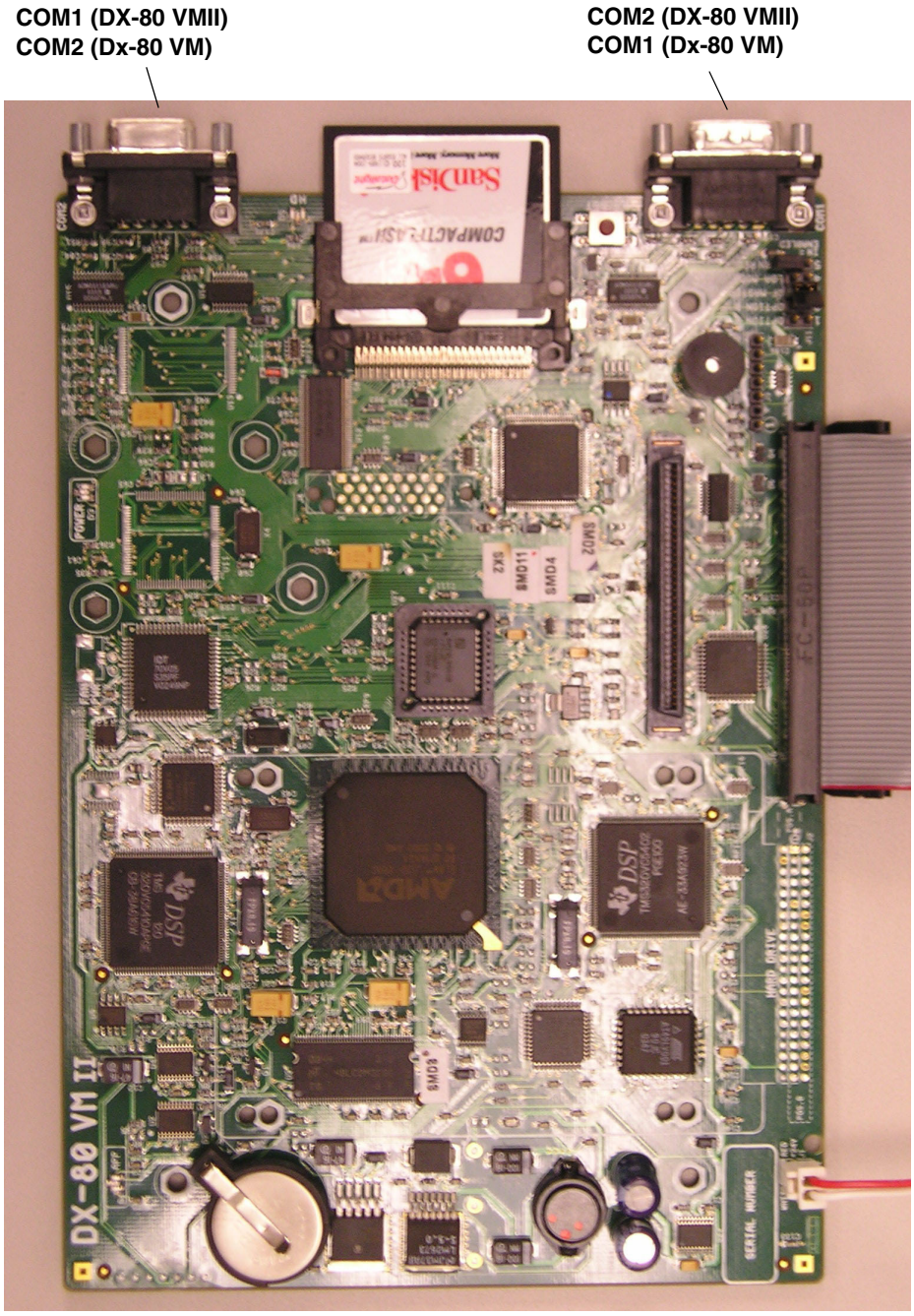


Figure 1-1 Corporate Office DX (Flash Version-p/n 7271C)

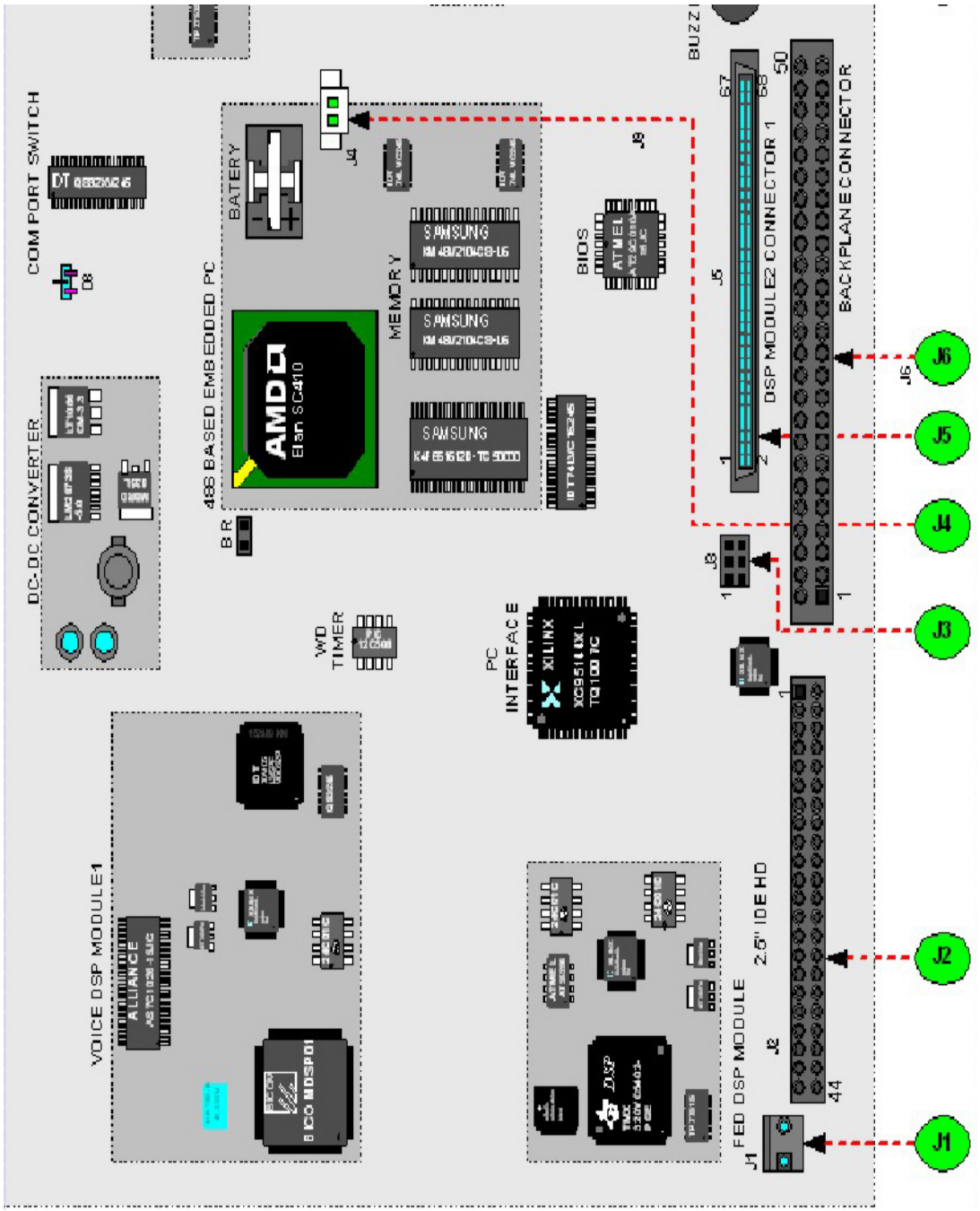


Figure 1-2 Corporate Office DX Jumper and Port Designations (p/n 7271C and *p/n 7270C*

2.7 Corporate Office DX (Hard Drive)

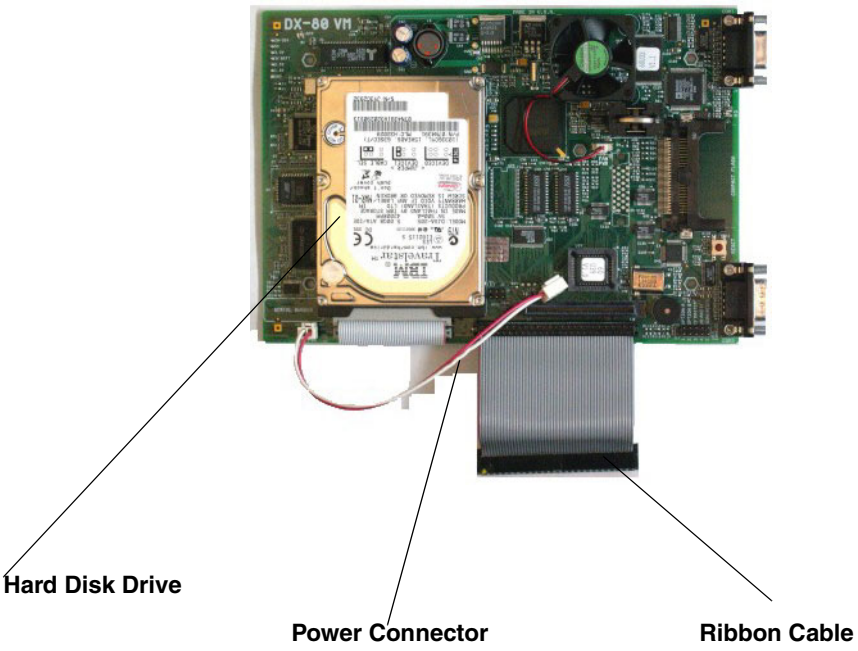


Figure 1-3 Corporate Office DX with Hard Drive (p/n 7270C)

2.8 Describing the Connectors, Ports, and Jumpers

The following connectors, ports, and jumpers apply to the 7271C and 7270C versions of the Corporate Office DX voice mail board.

- J1 is the back-plane power +24v main power connector
- J2 is for the 2.5 inch Hard Drive connector
- J3 is the ISP connector for programming the U22, U20, U18, and U10 CPLD
- J4 is the fan connector
- J5 is the 2nd DSP module daughter board interface connector.
- J6 is the back-plane connector to the KSU.
- J7 is the compact flash connector
- J9 (COM2 on DX-80 VMII; COM1 on DX-80 VM) is the RS-232 serial communications port 1, DB9 (female) connector for the embedded PC. This port is configured as a DTE device. This port connects to your PC using the supplied straight-through cable and is used for making programming changes to the voice mail
- J10 (COM1on DX-80 VMII; COM2 on DX-80 VM) is the RS-232 serial communications port 2, DB9 (male) connector for the embedded PC. This port is configured as a DCE device. This port connects to the DB9 connector labled PC-DBA on the DX-80 CPM board.
- J11 is the Hard Drive/Compact Flash selection jumper.
- S1 is the “System Reset” switch.

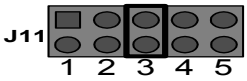
CAUTION

To avoid possible database corruption, shut down the voice mail before pressing the system reset switch. To perform a shutdown, follow the on-screen prompts from the KeyLink Communications program. From the DOS prompt, it is safe to press the system-reset switch.

Jumper Settings

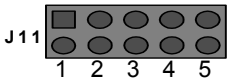
There are 3 sets of jumper currently used in this design.

J11-3 CF Master: JUMPER is ON: Compact Flash as Master boot device select. If jumper is ON, Compact Flash is the Master boot device. Use for Compact Flash configurations. Jumper is ON by default for Compact Flash models.

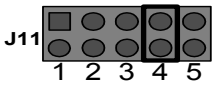


J11-4 (marked LBA MODE on DX-80 VMII) (HD and CF): Compact Flash and/or Hard drive can be used. The compact flash and hard disk interface are both configured as IDE devices residing on the same port. Therefore, one device must be configured for master operation and the other as a slave when both devices are used.

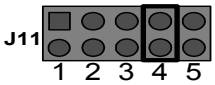
For Hard disk only configurations, Jumper is OFF: Jumper is OFF by default.

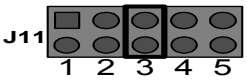


For Hard Disk and Compact Flash, HD as master, CF as Slave: Jumper is ON**.**

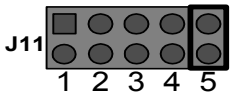


For Hard Disk and Compact Flash, CF as master, HD as Slave: Jumper is ON and Jumper **J11-3** is ON. Note: make sure the Hard Drive is configured as slave.

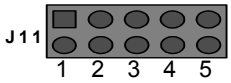


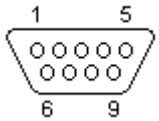


J11-5 BIOS serial screen/keyboard redirection control. BIOS serial screen/keyboard is enabled.



J11-5 BIOS serial screen/keyboard redirection is disabled. Jumper is OFF by default.





Pin	Function	Signal
1	Data Carrier Detect	DCD
2	Received Data	RD
3	Transmitted Data	TD
4	Data Terminal Ready	DTR
5	Signal Ground	SG
6	Data Set Ready	DSR
7	Request to Send	RTS
8	Clear to Send	CTS
9	Ring Indicator	RI

Figure 1-4 RS-232 DB9 Configuration

2.9 Installing the Corporate Office DX Board

The Corporate Office DX Voice Mail board mounts to the DX-80 CPM board standoffs and is connected by a ribbon cable and power cable. The ribbon cable connection is between the plug labeled VAA/VP on the CPM board and connector J6 on the voice processor board. The power connection is between the voice mail board (J1 Connector) and the KSU main board (408M). Refer to Figure 2-6 for the location of the power connector on the main board.

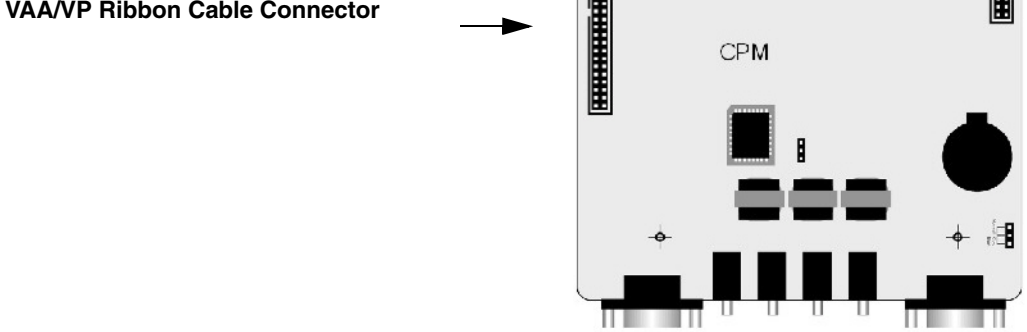


Figure 1-5 DX-80 CPM Board

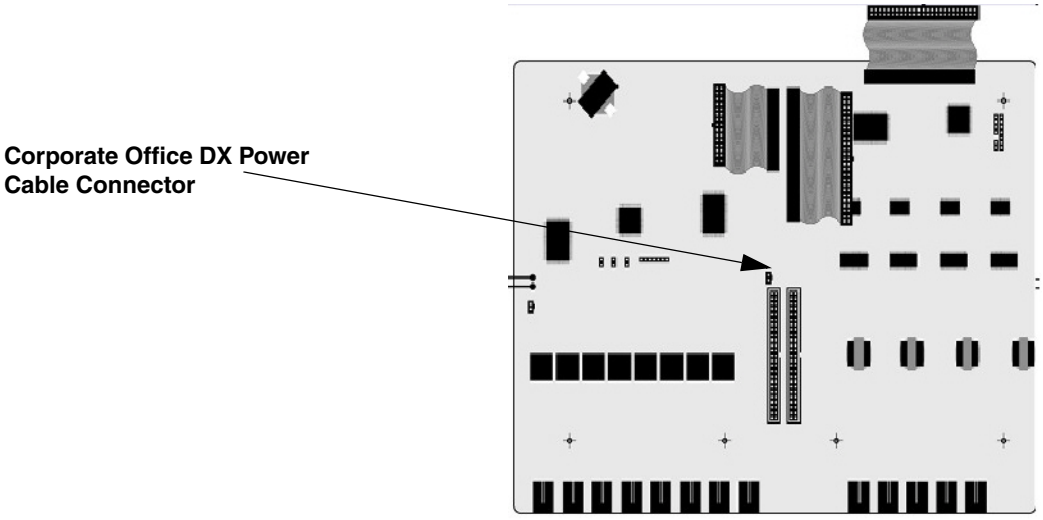


Figure 1-6 DX-80 KSU (408M)

2.10 Upgrading the Corporate Office DX

Upgrades for the Corporate Office DX Voice Mail include:

- 4-8 port expansion module
- 32Meg-128Meg flash drive upgrade

2.10.1 ADDING A FOUR-PORT EXPANSION MODULE

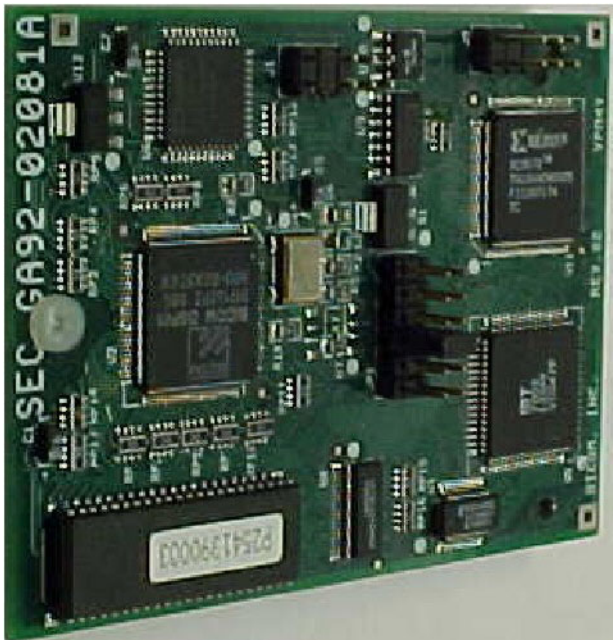


Figure 1-7 Four Port Expansion Module

By adding a 4-port expansion module, the Corporate Office DX is expanded to eight (8) voice ports. The following procedure outlines the steps required.

1. Ensure you have the four-port expansion module board (p/n 7272).
2. Turn off the main power switch to the DX-80 and unplug the power cord.
3. Remove the DX-80 cover.
4. Attach an anti-static strap to yourself and connect it to the ground of the DX-80 system.
5. Locate the J5 connector on the Corporate Office DX voice mail board. Refer to Figure 2-2.
6. Align the plug on the rear of the expansion module with the J5 connector and press firmly to seat the board.
7. Re-install the cover of the DX-80 and turn the power switch on

8. Refer to Section 4, beginning on page 18 for programming the additional ports. .

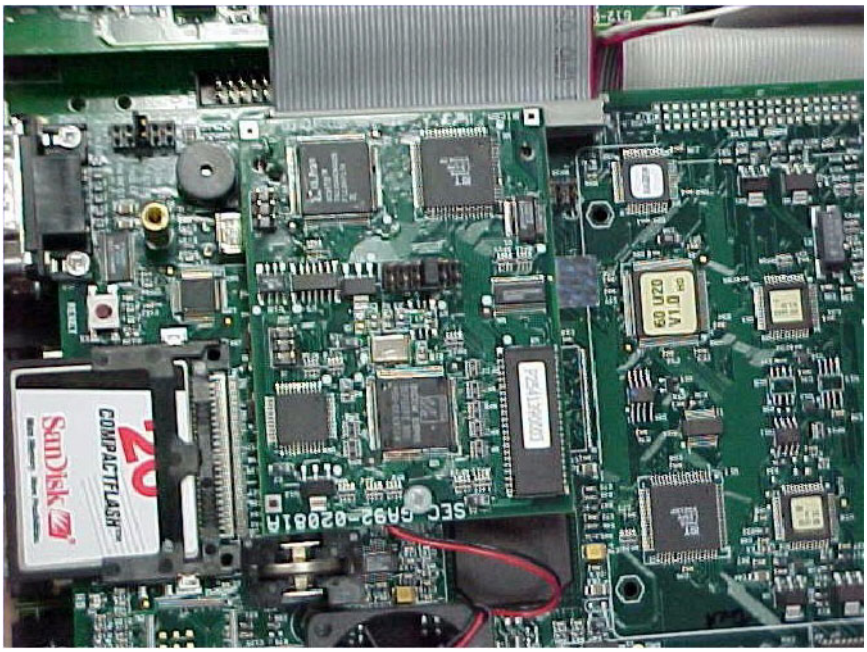


Figure 1-8 Corporate Office DX with Expansion Module Installed

2.10.2 UPGRADING THE CORPORATE OFFICE DX COMPACTFLASH® CARD

Refer to Comdial TechTip VVP000035 for information on upgrading the CompactFlash Card. This document is located on the Comdial Customer Care Center at http://comdial.com/ccc and can be found in the DX-80 literature/FAQ-Tech Tips category.

3. COMMUNICATING WITH THE SYSTEM

With the release of DX-80 software version F32, and the Corporate Office DX voice mail board, we have added pass-through communications capability. This feature allows you to perform the database administration on the Corporate Office DX ***or*** the DX-80 telephone system, from a single hardware connection, depending on which communications package is launched, that is, Keylink DX for programming the Corporate Office DX, or PC-DBA for programming the DX-80. These two programs cannot run concurrently; you must initiate a separate session for each.

With the hard drive version of the Corporate Office DX (p/n 7270C), an on-board modem can be used for optional remote access to either system. On the flash card version (p/n 7271C), an external modem can be attached to the COM 1 port (of the DX-80 VM version) or the COM 2 port (of the DX-80 VMII version) of the voice mail board, to achieve pass-through capability. (For more information on the two versions of the voice mail board, see Section 2.5, *Corporate Office Board Versions*.)

To use this feature, you must meet the following requirements:

- Attached PC must be running Keylink software release DX V1.0 to connect to the Corporate Office DX,
- Attached PC must be running PC-DBA to connect to the DX-80, and...
- DX-80 software must be F32 or later.

Note: To gain access to the serial port connections and the system boards, remove the cover of the DX-80 and attach an anti-static strap to yourself and the ground of the DX-80 system.

3.1 About Keylink DX V1.0

Keylink DX is a new Windows application designed specifically to provide remote administration of the Corporate Office DX voice mail board. This new application is an upgrade from the DOS remote.exe program that provides remote control of the voice mail card. The following features apply to Keylink DX.

- Supports auto baud detection when connected to COM2 of the Corporate Office DX.
- May be administered remotely via a dial-up connection or through a direct connection on-site.
- Connection configuration information is saved in *.klx files. Different configurations can be stored and recalled from disk, allowing for ease of use when one computer is used to administer many sites.
- Supports file transfers using Zmodem protocol.

This software program resides on an included CD and should be installed on the PC from which a direct or remote connection is required.

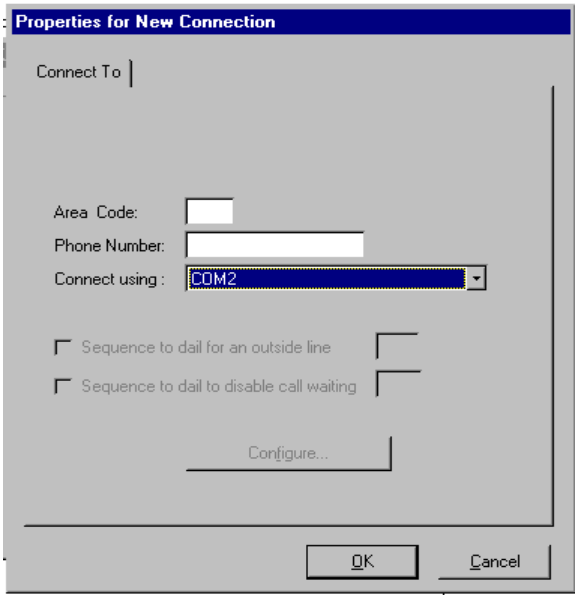
3.2 Configuring for a Direct Connection

Each 7270C Corporate Office DX board is shipped with a small 9-pin serial ribbon cable and a 9-pin straight-through serial communications cable. The 9-pin ribbon cable should be installed between COM1 of the Corporate Office DX board and the PC-DBA connector of the DX-80 CPM board. On-site communications can then be obtained by attaching the straight through serial cable from the PC's serial port to COM2 of the voice mail board.

3.2.1 COMMUNICATING WITH KEYLINK

Refer to Section 5 for specific programming requirements for the Corporate Office DX.

1. Install Keylink software version DX V1.0 on the PC if not already installed. This file is located on the included CD.
2. Start Keylink by double clicking on the KeylinkDX icon.
3. Click on *File* and then *New Connection*.



4. Select the PC's communications port that you will be using. If this a remote connection, select modem and enter the phone number you will use for accessing the system. Click *OK* to accept. Click on *File* and *Save As* to save this setting for future use.
5. Open the *Call* drop-down menu item and click on *Connect*. If this is a remote connection, the call will be dialed.

6. Keylink will invoke its Auto-Baud detect routine until a match is found. Once connected, the normal DX voice mail screen is displayed.

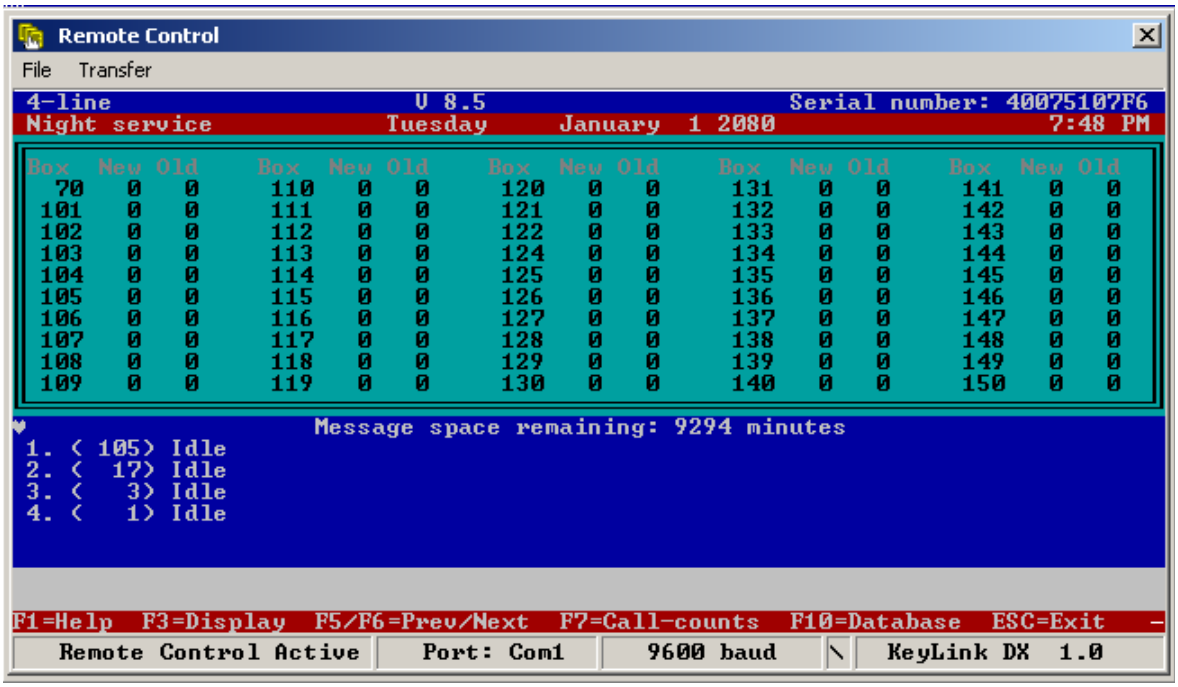


Figure 1-9 Corporate Office System Status

7. To begin programming, press the F10 key.

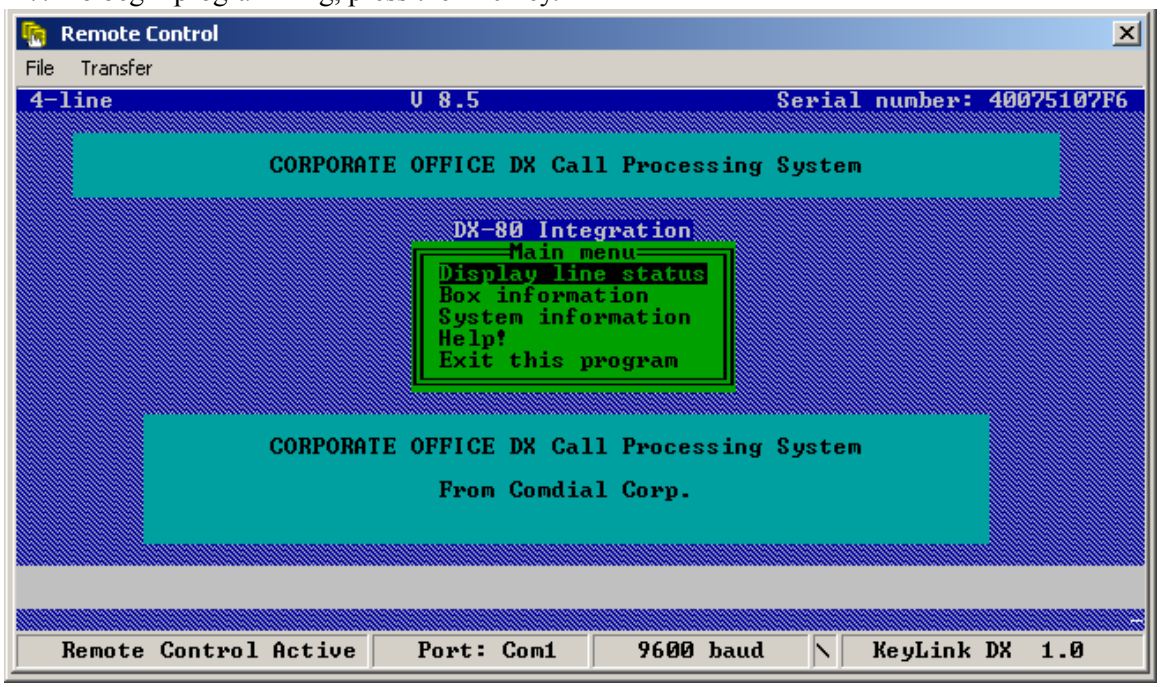


Figure 1-10 Corporate Office Main Programming Screen

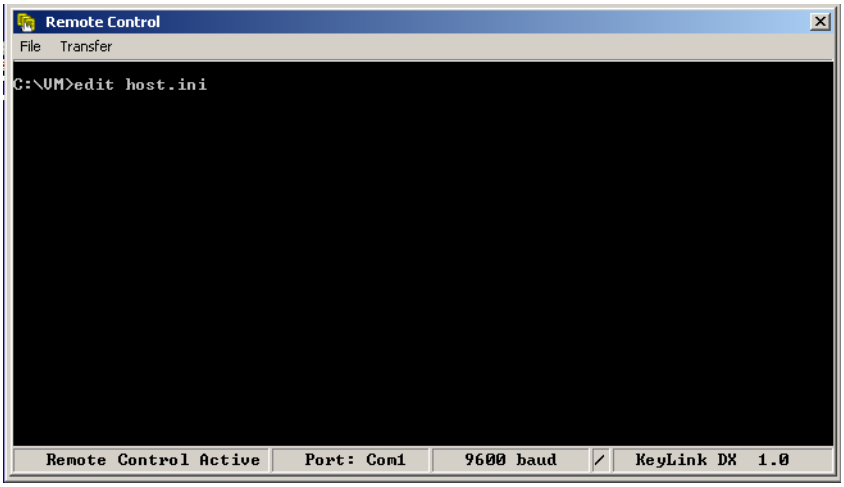
3.2.2 CONFIGURATION OPTIONS ON THE CORPORATE OFFICE DX

Some changes to the configuration of the Corporate Office DX can be accomplished by modifying the contents of the HOST.INI and/or GOVM.BAT files. These two (2) files reside on the DX drive, in the C:\VM directory.

Host.INI

This file is used to set the communication port parameters for access to the Corporate Office DX. This file includes settings for direct connection, modem support, and pass-through functionality. An on-board text editor, "*Edit.Exe*", is used to modify this file. To edit the *Host.INI* file, perform the following steps.

1. While connected to the Corporate Office DX with KeyLink software, exit the voice mail by pressing the *Esc* key.
2. Enter the password when prompted and press *Enter*. If a password has not been set, just press *Enter*.
3. You should now be in the DOS mode with the C:\VM prompt displayed.
4. From the "C:\VM" prompt, enter *Edit Host.INI*.



5. The existing file displays.

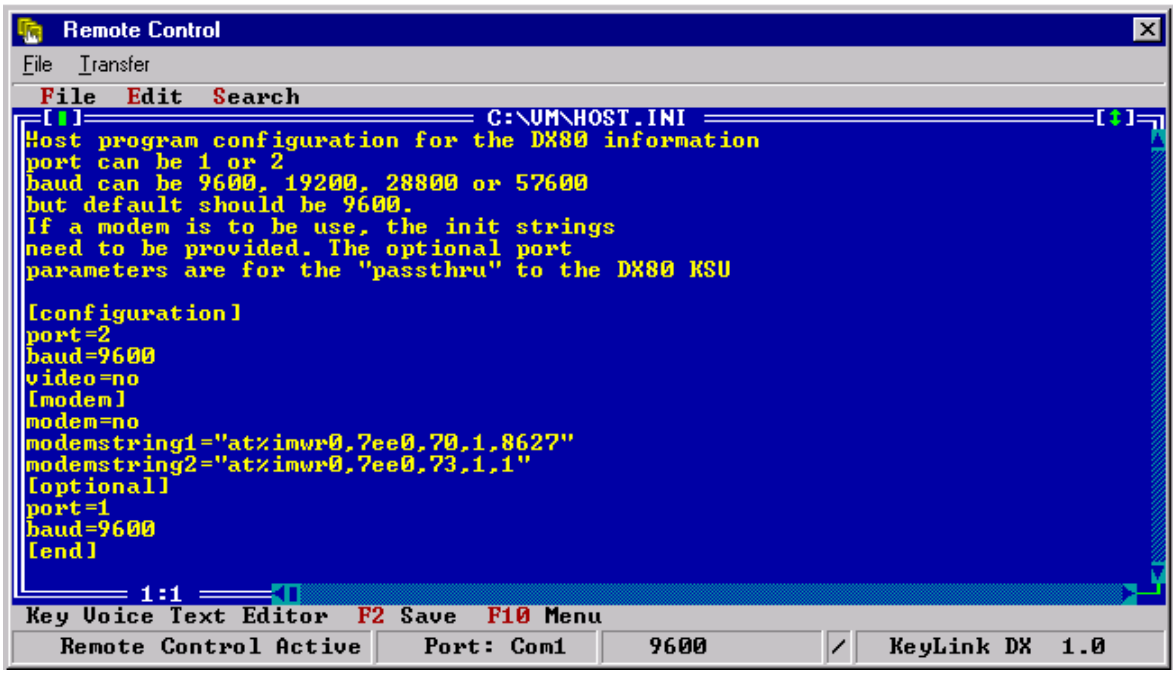


Figure 1-11 Host.INI File Content (DX80 VM version)

6. Reviewing the displayed file, the following is a description of the associated fields.

- [Configuration]

Port: This defines which port is used for outside communications. This will always be "*2*" for the DX-80 VMII version of the board, or "1" for the DX-80 VM version. (For more information on the two versions of the voice mail board, see Section 2.5, *Corporate Office Board Versions*.)

Baud: This is the baud rate setting for Com Port 2 (DX-80 VMII) or Com Port 1 (DX-80 VM). This setting affects the local on-site connection and any remote dial-up connection if that option is configured. Valid entries are 9600, 19200, 28800, and 57600. If you intend to use the "pass-through" mode to administer the DX-80 via PC-DBA, this setting should be 9600 or 19200, depending on the DX80 PC-DBA baud parameter.

Note: The maximum baud rate supported on the DX-80 Digital Telephone System is 19.2K baud.

Video: This value determines whether or not the TSR is to use the Voice Mail's video memory. Since the VM does not contain any video memory, this setting should always be set to "*NO*".

- [Modem]

Modem=Yes--The Corporate Office DX (hard drive version) contains an on-board modem attached to a reserved timeslot (extension 170). When set to "Yes", the DX Host will attempt to initialize this modem on the connected COM Port.

Modemstring1 and Modemstring2: These are the initialization strings sent to the onboard modem during startup. Both of these modem strings are required.

- [Optional]

This area applies to the Corporate Office DX and is specific to the "Pass-Through" administration of the DX80 via PC-DBA on the connection defined in the Configuration Section.

Port: this defines the Com Port to use for pass-through communications. This value must be set to "*2*" (DX-80 VMII) or "1" (DX-80 VM).

Baud: This is the baud rate to used when communicating to the DX80 via pass-through mode. **This value must match that set in the DX80 KSU, the PC-DBA RS232C port, and the baud rate specified for COM 1 (DX-80 VMII) or COM2 (DX-80 VM) in the Configuration section of this file**.

Note: In order to use the pass-through mode, the special 9-pin serial ribbon cable must be connected between Com2 (DX-80 VM) or Com1 (DX-80 VMII) of the Corporate Office DX and the PC-DBA port of the DX-80.

7. To exit and save any changes made to this file, press *F10*. When prompted, enter "Y" for Yes, to save any changes. You should now be returned to the C:\VM prompt.
8. Press the red reset button on the Corporate Office DX voice mail board to activate any changes. This action will cause the communications link between the PC and the voice mail board to be lost. When you hear a series of four (4) short beeps, the reset is complete. To reacquire the link, select *File* and *Relink* from the drop-down menu.
9. To exit the session with Keylink, select File and Exit from the drop-down menu.

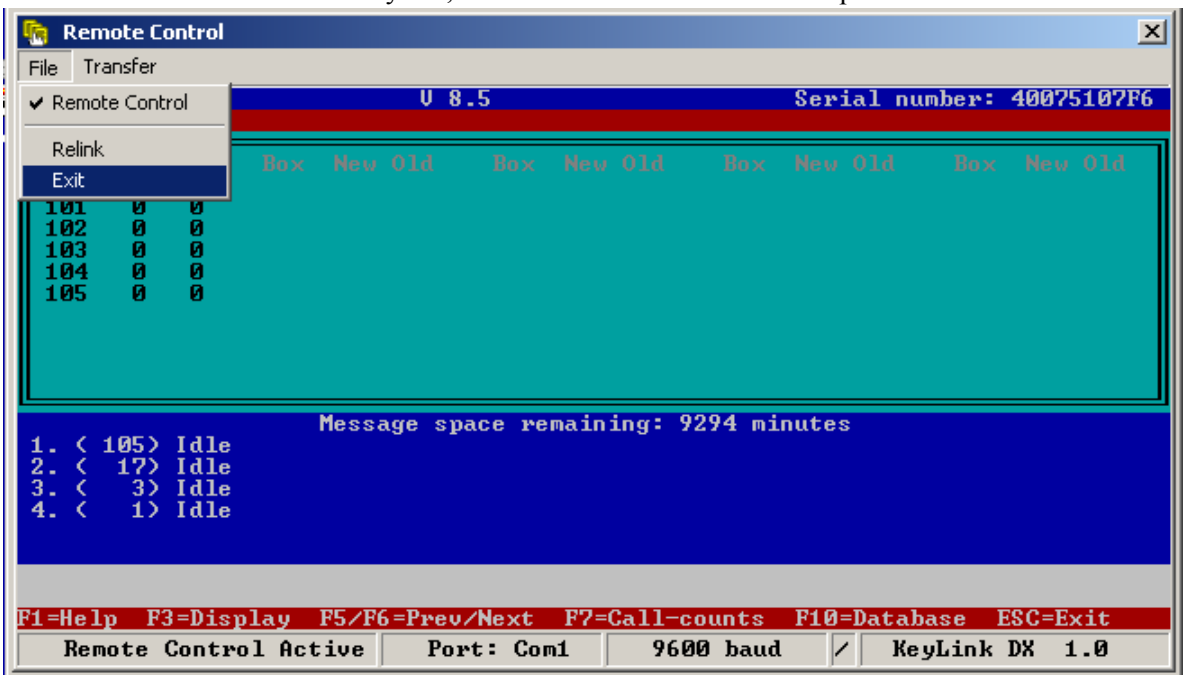
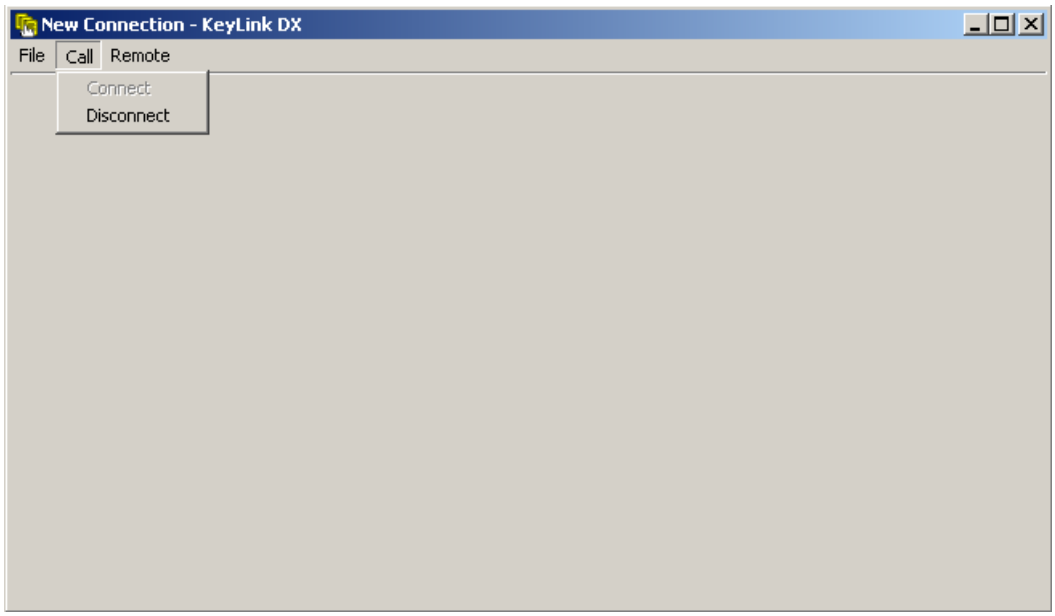


Figure 1-12 Exit a Keylink Session

10. Next, select *Call* and *Disconnect* from the drop down-menu.



11. Then, select File and Exit from the drop-down menu. This action will return you to your Windows environment.

3.2.3 USING THE FILE TRANSFER FEATURE OF KEYLINK

KeyLink version V1.0 includes a new menu item that will allow files to be transferred between the Corporate Office DX and the attached PC. This menu option is intended to provide a method for transferring individual or a small number of files, either remotely or while at the customer's premises. If the system is setup for pass-through programming of the DX-80 KSU, the maximum file transfer speed is limited to 19.2K baud. This speed may not be efficient for backing up or restoring an entire system. Refer to sections 3.6 and 3.7 for instructions on performing large scale file transfers associated with a system backup and restore.

Note: File transfers will require you to halt the voice mail services and go to the DOS mode of operation. To restart the voice mail, either press the restart button or enter *GOVM* from the C:\VM directory.

Two (2) additional utilities are included with each Corporate Office DX, and are used with KeyLink DX V1.0., to perform file transfers. They are:

- DXSENDFL-Sends the specified file(s) **from** the Corporate Office DX. Interfaces with the '*Receive File*' menu item of KeyLink DX.
- DXGETFL-Gets the specified file(s) **from** the PC. Interfaces with the '*Send File*' menu item of KeyLink DX.

3.2.3.1 Transferring a File from the Corporate Office DX to a PC

In this example, you will be transferring the GOVM.BAT file to a PC.

1. While connected to the Corporate Office DX with KeyLink software, exit the voice mail by pressing the *Esc* key.

2. Enter the password when prompted and press *Enter*. If a password has not been set, just press *Enter*.
3. You should now be in the DOS mode with the C:\VM prompt displayed.
4. Type the following command line from the C:\VM prompt, and then press *Enter*.
   DXSENDFL GOVM.BAT
5. From the KeyLink window, select *Transfer* and *Receive File* from the drop-down menu.

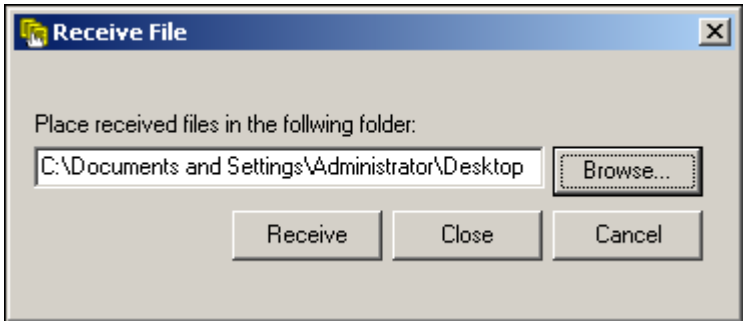


Figure 1-13 Sending Files to PC

6. Click on Browse and select the location where the received file will be stored, then click on *Receive*.
7. The file is transferred from the Corporate Office DX to the location you specified.

Note: Multiple files can be transferred by using the '' wildcard character in the filename. For instance, to transfer all database files, enter DXSENDFL *.dvm.*

8. To restart the voice mail, enter *GOVM* from the C:\VM directory, or press the reset button.

3.2.3.2 Transferring a File from a PC to the Corporate Office DX

In this example, you will be transferring the GOVM.BAT file from a PC to the DX Voice Mail.

1. While connected to the Corporate Office DX with KeyLink software, exit the voice mail by pressing the *Esc* key.
2. Enter the password when prompted and press *Enter*. If a password has not been set, just press *Enter*.
3. You should now be in the DOS mode with the C:\VM prompt displayed.
4. Navigate to the directory to where you want to file transferred if required.
5. Type the following command line from the C:\VM prompt, and then press *Enter*.
   DXGETFL
6. From the KeyLink window, select *Transfer* and *Send File* from the drop-down menu.

7. Using the Browse button, locate and click on the file name you wish to transfer, then click on *Open*.

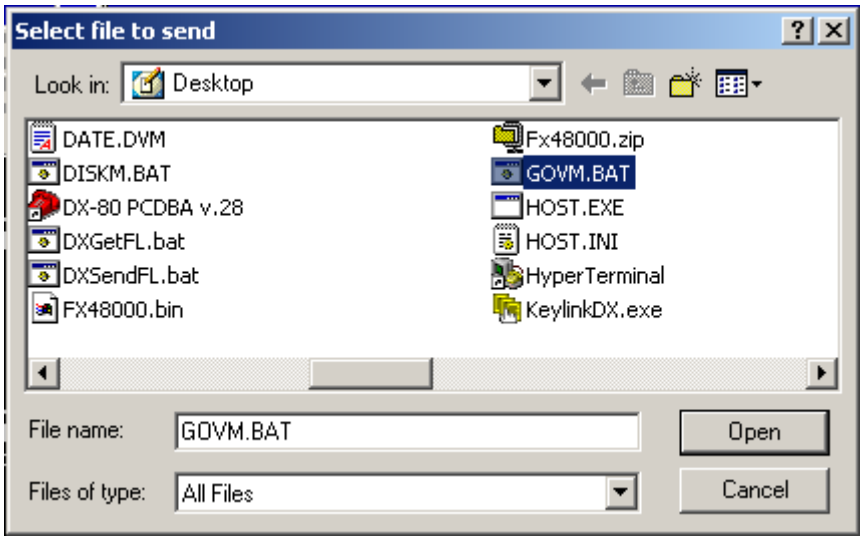


Figure 1-14 Sending an Individual File from the PC.

8. The file is transferred from the PC to the Corporate Office DX.
9. If sending multiple files from the PC, enter the path and appropriate wildcard characters in the Send File dialog box.

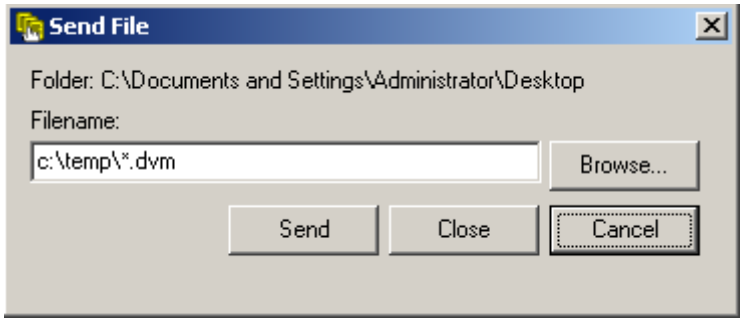


Figure 1-15 Sending Multiple Files

10. To restart the voice mail, enter *GOVM* from the C:\VM directory or press the reset button.

3.3 Communicating with PC-DBA

1. Install PC-DBA software if not already installed.
2. Start PC-DBA by double clicking on the PC-DBA icon.
3. PC-DBA launches. Refer to Section 4 for programming requirements for the DX-80 system.

3.4 Configuring for a Remote Connection

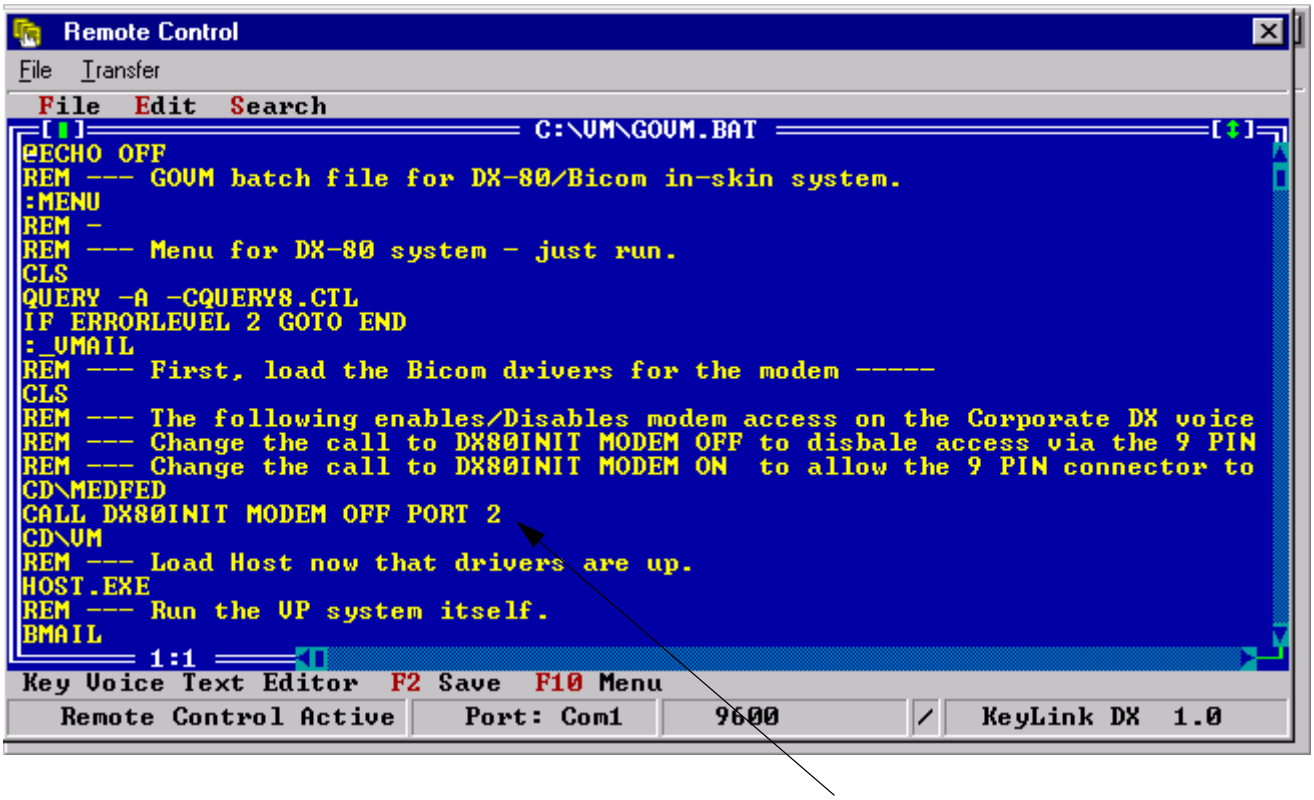
With DX-80 software release F32 and the on-board modem built into the Corporate Office DX Hard Drive Voice Mail, you have the capability for remote database administration. When properly configured, you can perform database administration on the voice mail using Keylink DX V1.0 and the DX-80 using PC-DBA.

NOTICE

Remote access and local access are mutually exclusive of each other. Once configured for remote access, you will not be able to perform local database administration using the direct connection method until you reconfigure the port for local access. See Section 3.5, *Reconfiguring for Local Access* for instructions on how to reconfigure the system for local access.

In order to setup the system for remote access, perform the following steps:

1. Connect to the Corporate Office DX using the procedure outlined in Section 2.9.2.1.
2. Press the *Esc* key followed by the *Enter* key.
3. This should take you to the DOS prompt C:\VM.
4. Edit the GOVM.BAT file by typing *Edit GOVM.BAT.* This will open the text editor and display the contents of the batch file.


Remote Control
File Transfer
File Edit Search
C:\VM\GOVM.BAT
@ECHO OFF
REM --- GOVM batch file for DX-80/Bicom in-skin system.
:MENU
REM -
REM --- Menu for DX-80 system - just run.
CLS
QUERY -A -CQUERY8.CTL
IF ERRORLEVEL 2 GOTO END
:_VMAIL
REM --- First, load the Bicom drivers for the modem -----
CLS
REM --- The following enables/Disables modem access on the Corporate DX voice
REM --- Change the call to DX80INIT MODEM OFF to disbale access via the 9 PIN
REM --- Change the call to DX80INIT MODEM ON to allow the 9 PIN connector to
CD\MEDFED
CALL DX80INIT MODEM OFF PORT 2
CD\VM
REM --- Load Host now that drivers are up.
HOST.EXE
REM --- Run the VP system itself.
BMAIL
1:1
Key Voice Text Editor F2 Save F10 Menu
Remote Control Active
Port: Com1
9600
KeyLink DX 1.0

5. Locate the line that reads “CALL DX80INIT MODEM OFF PORT2 (DX-80 VMII) or “CALL DX80INIT MODEM OFF PORT1 (DX-80 VM).

6. Position the cursor at the beginning of “OFF”, and change to “ON”. When you have made the change the line should now read “CALL DX80INIT MODEM ON”.

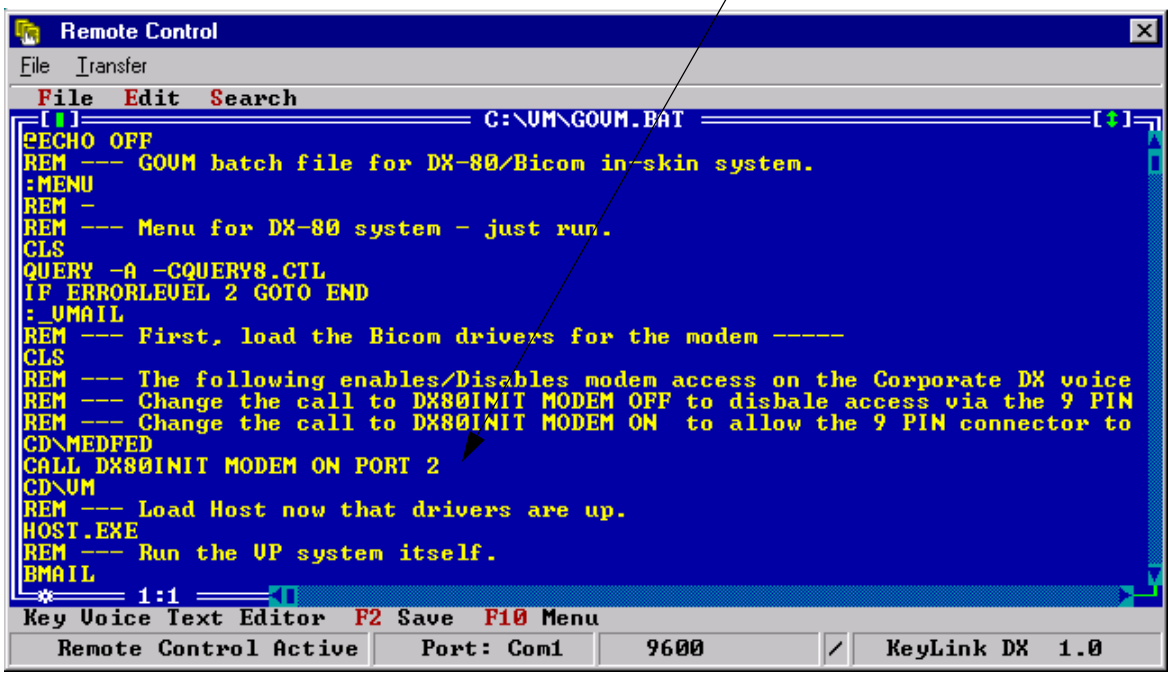

Remote Control
File Transfer
File Edit Search
C:\VM\GOVM.BAT
@ECHO OFF
REM --- GOVM batch file for DX-80/Bicom in-skin system.
:MENU
REM -
REM --- Menu for DX-80 system - just run.
CLS
QUERY -A -CQUERY8.CTL
IF ERRORLEVEL 2 GOTO END
:_VMAIL
REM --- First, load the Bicom drivers for the modem -----
CLS
REM --- The following enables/Disables modem access on the Corporate DX voice
REM --- Change the call to DX80INIT MODEM OFF to disbale access via the 9 PIN
REM --- Change the call to DX80INIT MODEM ON to allow the 9 PIN connector to
CD\MEDFED
CALL DX80INIT MODEM ON PORT 2
CD\VM
REM --- Load Host now that drivers are up.
HOST.EXE
REM --- Run the VP system itself.
BMAIL
1:1
Key Voice Text Editor F2 Save F10 Menu
Remote Control Active
Port: Com1
9600
KeyLink DX 1.0

Figure 1-16 Changing Modem Setting in GoVM.BAT File

7. After making the change, press *F10* and *Enter* to save and exit.
8. You should now be returned to the DOS prompt.
9. Select *File/Exit* from the drop-down menu.
10. Select *Call/Disconnect* from the drop-down menu.
11. Select *File/Exit* from the drop-down menu.
12. Disconnect the serial cable from COM 2 (DX-80 VMII version) or from COM 1 (DX-80 VM version) of the Corporate Office DX Voice Mail board.
13. Ensure that the 9-pin serial ribbon cable is in place between COM 1 (DX-80 VMII version) or from COM 2 (DX-80 VM version) of the Corporate Office DX Voice Mail board and the PC-DBA connector of the DX-80 CPM board.
14. Press the Red reset button on the Corporate Office DX Voice Mail board.
15. Replace the cover of the DX-80.
16. The Corporate Office DX and the DX-80 are now configured for Remote Access. Access to the system can be made by dialing into extension 170. This can be either through a dedicated line programmed to ring that extension, creating mailbox 170 in the auto attendant and performing a blind transfer to that extension, or calling into the system and have someone transfer you to extension 170.

Note: With the system configured for Remote Access, you will not be able to communicate with the Corporate Office DX through Com Port 2 (DX-80 VMII version) or Com Port 1 (DX-80 VM version), using the direct connection method. Refer to Section 3.5, *Reconfiguring for Local Access*, for instructions on reconfiguring the system for direct connection access.

3.5 Reconfiguring for Local Access

1. The first requirement for reconfiguring the system for a local connection is to gain access to a communication port. Since the normal port used for local access (COM2 for DX-80 VMII version; COM1 for DX-80 VM version) has been redirected for remote access, you will use COM1 (for DX-80 VMII version)/COM 2 (for DX-80 VM version). This requires the use of a null modem cable with a female connector to plug into COM1 (for DX-80 VMII version)/COM 2 (for DX-80 VM version) of the Corporate Office DX Voice Mail board and the COM Port connector of the PC. Refer to the following table for the correct pin assignments for this cable.

Null Modem Cable Pin Assignments		
Female 9-Pin	**Description**	**Female 9-Pin**
NC	FG	NC
3	TD	2
2	RD	3
7	RTS	8
8	CTS	7
5	SG	5
6	DSR	4
4	DTR	6

2. Using HyperTerminal, start a session with the following settings:
   - Baud Rate Setting=38400
   - Data Bits =8
   - Parity=None
   - Stop Bits=1
   - Flow Control=None
   - Emulation=VT100
   - Function, Arrow and Ctrl Keys act as Windows Keys
3. Place a jumper across pin 5 of the J11 connector. See Section 2.8, *Describing the Connectors, Ports, and Jumpers* for the location of the connectors. The jumper location is labeled as SCRN REDIR on the circuit board. You do not need to power down the system to install this jumper.

4. Press the reset button on the voice mail board. After a few seconds, a menu will be displayed. Select item 2. This action will connect you to the onboard ROM DOS. If you fail to select item 2 within 8 seconds, you will need to reset the card again..

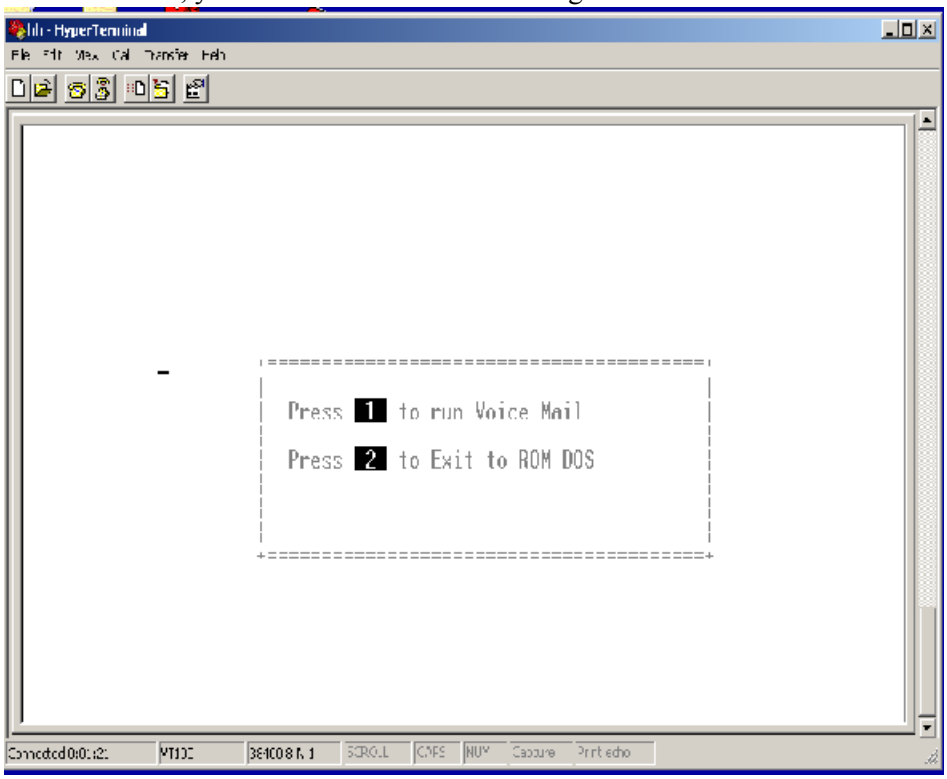
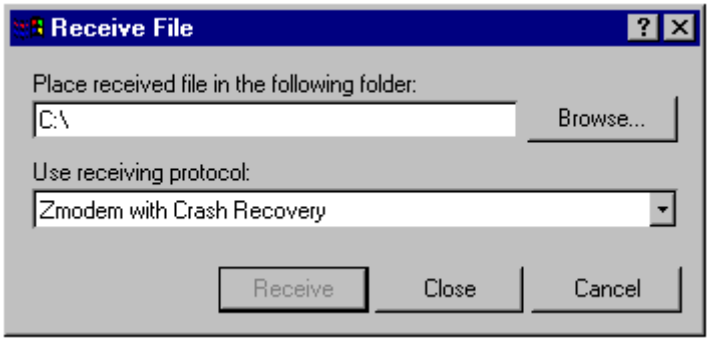


Figure 1-17 ROM DOS Selection

You should now be at the C:\VM prompt.

The next steps will utilize the built in functions of the DX utilities and the transfer options of HyperTerminal.

5. From the HyperTeminal main window, select the *Transfer* menu and select *Receive File* from the drop-down menu. Specify where on your computer you wish to save the file and select Zmodem for the receiving protocol. Click on *Close*, to close the window.



6. From the DOS (C:\VM>) prompt of the DX, enter *SENDFILE GOVM.BAT* and press Enter. The file is transferred to your PC to the location you specified in step 7.

7. Using a text editor on your PC, open the file and locate the line that determines the modem status.

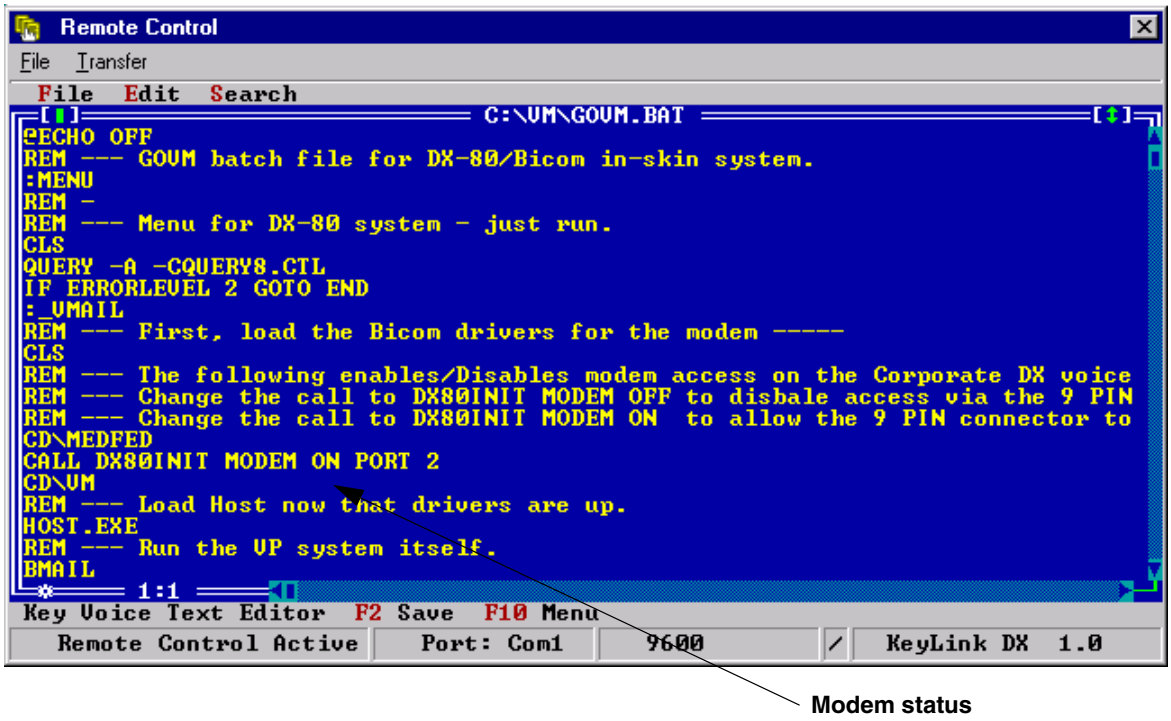

Remote Control
File Transfer
File Edit Search
C:\VM\GOVM.BAT
@ECHO OFF
REM --- GOVM batch file for DX-80/Bicom in-skin system.
:MENU
REM -
REM --- Menu for DX-80 system - just run.
CLS
QUERY -A -CQUERY8.CTL
IF ERRORLEVEL 2 GOTO END
:_VMAIL
REM --- First, load the Bicom drivers for the modem -----
CLS
REM --- The following enables/Disables modem access on the Corporate DX voice
REM --- Change the call to DX80INIT MODEM OFF to disbale access via the 9 PIN
REM --- Change the call to DX80INIT MODEM ON to allow the 9 PIN connector to
CD\MEDFED
CALL DX80INIT MODEM ON PORT 2
CD\VM
REM --- Load Host now that drivers are up.
HOST.EXE
REM --- Run the VP system itself.
BMAIL
1:1
Key Voice Text Editor F2 Save F10 Menu
Remote Control Active
Port: Com1
9600
KeyLink DX 1.0
Modem status

Figure 1-18 Editing the GOVM.BAT File

8. Change the line *CALL DX80INIT MODEM ON PORT 2* (for DX-80 VMII version) to read *CALL DX80INIT MODEM* OFF *PORT 2*. For DX-80 VM version, change the line *CALL DX80INIT MODEM ON PORT 1* to read *CALL DX80INIT MODEM* OFF *PORT 1*.
9. Save the file.
10. From the DOS (C:\VM>) prompt of the DX, type *GETFILE* and press Enter.
11. From HyperTerminal, click on the *Transfer Menu* and select *Send File*.

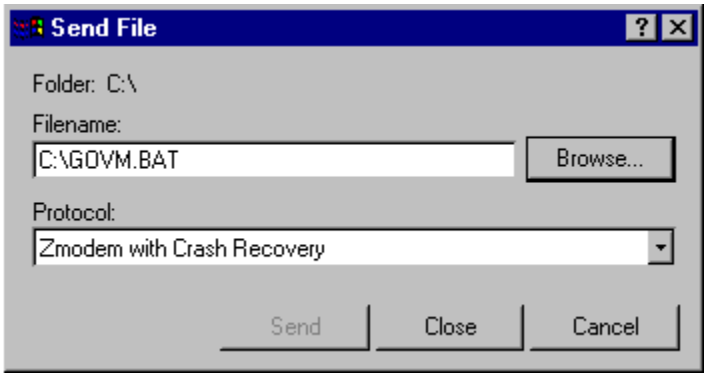


Figure 1-19 HyperTerminal Send File Dialog Screen

12. Using the Browse button, locate the file saved in step 11.
13. Select the file and click on Send.
14. The file is transferred to the DX system.
15. Remove the null modem cable connected to COM1 and reinstall the 9-pin ribbon cable.

16. Remove the jumper from J11-5.
17. Press the reset button on the DX voice mail card.
18. Install the straight-through serial cable to COM 2 (for DX-80 VMII version) or COM 1 (for DX-80 VM version) of the DX voice mail card.
19. Launch KeyLinkDX or PC-DBA to verify the change.
20. If required, reconfigure the system for remote access prior to leaving the site. Refer to Section 3.4, *Configuring for a Remote Connection* for instructions.

3.6 Backing Up the System

If the system has a hard drive or other system failure, or an upgrade to the flash card is performed, the site can lose some or all of the system data. Without a current backup, you may need to re-enter all of the system programming. It is strongly recommended that the system installer and on-site system supervisor work closely to ensure that system backups are made frequently.

This section, and Section 3.7 outlines the steps required for transferring files between the PC and the Corporate Office DX/DX-80 systems. In most instances these processes will allow you to efficiently save and restore files, either connected directly to the system while on-site, or by remotely accessing the system.

In some instances, you may wish to transfer files at a faster baud rate than is supported through the COM 1 port of the Corporate Office DX. Particularly, when the system is configured to program both the voice mail system and the DX-80. That is, the DX-80's maximum supported baud rate is 19.2k baud. An alternate method is available which allows you to transfer files at 38.4k baud. This method may be desired when a large number of files and/or large file sizes are saved and restored.

Note: Saving and restoring files on the Corporate Office DX can be accomplished in a variety of ways. The methods presented in this document are based on a serial communications link to the system. Refer to Comdial TechTip # VVP000035 for additional methods.

Saving and restoring files is accomplished by using the built-in utilities provided with each Corporate Office DX. These utilities, SENDFILE and GETFILE are located in the C:\UTILS directory of the voice mail.

- SENDFILE- Used with the Transfer menu of HyperTerminal to send a file to the remote computer.
- GETFILE-Used with the Transfer menu of HyperTerminal to retrieve a file from the remote computer.

To create a backup of the Corporate Office DX files, you should back up the following information.

- Database and Setup files-Stored in the \VM directory
- Voice files such as greetings, names, and messages-Stored in the \VM\M directory

Since system backups and restore operations include a potentially large amount of data, the most efficient method for performing these operations is by using HyperTerminal. This requires the use of a null modem cable with a female connector to plug into COM1 of the Corporate Office DX Voice Mail board and the COM Port connector of the PC. Refer to Section 3.5 for the correct pin assignments for this cable and the setup requirements.

3.6.1 COPYING THE DATABASE AND SETUP FILES

To create a backup copy of the database and setup files:

1. Using HyperTerminal, start a session with the following settings:
   - Baud Rate Setting=38400
   - Data Bits =8
   - Parity=None
   - Stop Bits=1
   - Flow Control=None
   - Emulation=VT100
   - Function, Arrow and Ctrl Keys act as Windows Keys
2. Place a jumper across pin 5 of the J11 connector. Refer to page 7 for the location of the connectors. The jumper location is labeled as SCRN REDIR on the circuit board. You do not need to power down the system to install this jumper.

3. Press the reset button on the voice mail board. After a few seconds, a menu will be displayed. Select item 2. This action will connect you to the onboard ROM DOS. If you fail to select item 2 within 8 seconds, you will need to reset the card again.

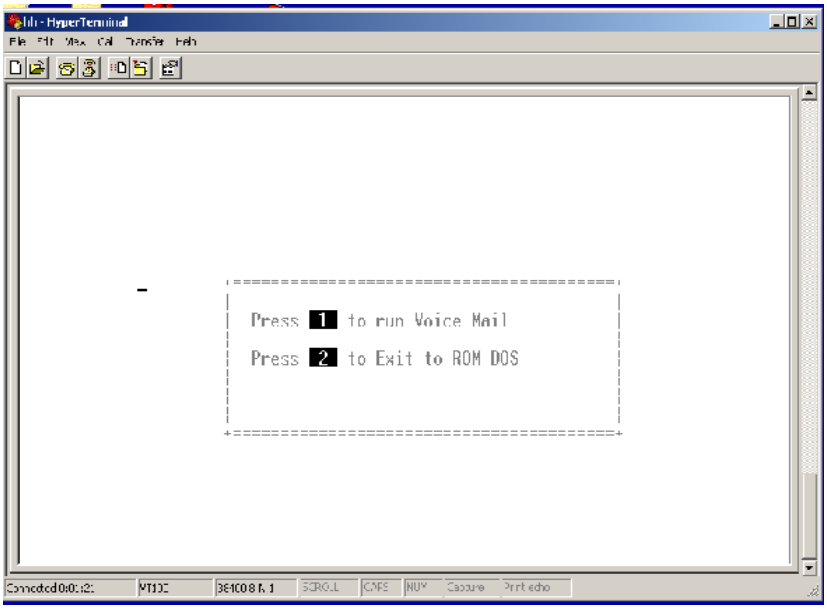


Figure 1-20 ROM DOS Selection

4. You should now be at the C:\VM prompt. If not, type the command C*:\VM*.
5. From the HyperTerminal Transfer Menu, select *Receive File* from the drop-down menu. Enter the location you wish to store the files.
6. Copy the database files by entering the following command line from the DOS prompt and then pressing *Enter*.

   SENDFILE *.DVM

   Database files resident on in the C:\VM directory are:

   - CDTABASE.DVM
   - DATE.DVM
   - LDTABASE.DVM
   - MDTABASE.DVM
   - SDTABASE.DVM
   - BDTABASE.DVM

   Each of the preceding files will now be copied into the directory you specified in item 5.
7. Continue with the next section to copy the greetings, names, and messages.

3.6.2 COPYING GREETINGS, NAMES, AND MESSAGES

To create a backup copy of greetings, names, and messages:

1. From the Corporate Office DX DOS mode prompt, navigate to the messages directory by typing CD\VM\M then press *Enter*.

2. To change the storage location of the greetings, names, and messages files, select *Transfer/ Receive Files* from the HyperTerminal menu and select the new location for storage.

   Greetings, names, and messages files are identified by the following:

   - GT*.*=Message Files
   - NM*.*=Names Files
   - MG*.*=Recorded Messages Files

3. Copy the greetings, names, and messages files by entering the following command line from the DOS prompt and then pressing *Enter.*

   SENDFILE GT*.*

   Repeat this command for each of the remaining file types.

4. When all backups have been completed, remove the strap from the J11-5 connector and reinstall the 9-pin ribbon cable between COM1 and the PC-DBA connector of the DX-80 CPM board.

Note: To restart the Corporate Office DX voice mail, type *GOVM* from the C:\VM directory, or press the reset button on the voice mail board.

3.7 Restoring Files on the Corporate Office DX

The restore procedure described in this section does not include all the programming files needed to run the voice mail system. This section only pertains to the customized settings unique to the particular installation. Be sure to copy the files back to the correct directory and sub-directory.

3.7.1 RESTORING THE DATABASE AND SETUP FILES

Refer to Section 3.6 for information on creating backup files for the Corporate Office DX. The following procedure will be used to restore those files previously saved.

1. Using the same connection procedures outlined in the preceding section, navigate to the C:\VM directory on the Corporate Office DX.
2. Retrieve the stored database files by entering the following command from the C:\VM prompt.

   GETFILE *.DVM

3. From the HyperTerminal menu, select *Transfer/Send Files*.
4. In the Send File dialog window, enter the path and file name where the files are stored. (i.e. C:\VM*.DVM). Select Zmodem as the protocol and press *Send*.
5. All stored files that meet the specified criteria will be transferred from the remote computer to the Corporate Office DX.
6. Continue with the next section to restore names, greetings, and messages.

3.7.2 RESTORING NAMES, GREETINGS, AND MESSAGES

To restore the greetings, names, and messages files:

1. Using the same connection procedures previously outlined, navigate to the C:\VM*M* directory on the Corporate Office DX.

   Greetings, names, and messages files are identified by the following:

- GT*.*=Message Files
- NM*.*=Names Files
- MG*.*=Recorded Messages Files

2. Retrieve the greetings files from the remote PC by entering the following command line from the DOS prompt and then press *Enter.*

   GETFILE GT*.*

3. From the HyperTerminal menu, select *Transfer/Send Files*.
4. In the Send File dialog window, enter the path and file name where the files are stored (i.e. *C:\VM\M\GT*.*). Select Zmodem as the protocol and press *Send*.
5. All stored files that meet the specified criteria will be transferred from the remote computer to the Corporate Office DX.

Repeat steps 2-4 for each of the remaining file types (NM*.* and MG*.*).

6. When all files have been restored, remove the strap from the J11-5 connector and reinstall the 9-pin ribbon cable between COM1 and the PC-DBA connector of the DX-80 CPM board.
7. To restart the Corporate Office DX voice mail, type *GOVM* from the C:\VM directory, or, press the restart button on the voice mail board.

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4. UNDERSTANDING SUPPORTED FEATURES

4.1 Feature Comparison Matrix

The following matrix compares the Corporate Office DX Flash and Corporate Office DX Hard Drive voice mail systems.

Description	Corporate Office DX Flash	Corporate Office DX Hard Drive
Part Number	**7271C**	**7270C**
Maximum Number of Mailboxes	**100**	**10000**
Number of Ports	**4 (expands to 8)**	**4 (expands to 8)**
Storage	**90 min. (can be upgraded)**	**100 hours**
Built-in Modem	**No**	**Yes**
Platform	In-Skin DX-80	In-Skin DX-80
Auto Attendant Features		
Call Forwarding	✓	✓
Call Screening	✓	✓
Time/Day Announcements (Day, Lunch, Evening	✓	✓
Call Queuing	✓	✓
Multilingual Capability		✓
Customizable System Prompts	✓	✓
Port/Trunk Greetings	✓	✓
Scheduled Greetings	✓	✓
Directories and Dial By Name	✓	✓
TDD Compatibility	✓	✓
Paging Announcement Capability	✓	✓
Call Blocking	✓	✓
Auto Message Forward	✓	✓
Cascading Message Delivery	✓	✓
Distribution List/Group Boxes	✓	✓
Personal Distribution Lists	✓	✓
Guest/Client Mailboxes	✓	✓
Mailbox Default Operators	✓	✓
Message Confirmation	✓	✓

Description (Continued)	Corporate Office DX Flash	Corporate Office DX Hard Drive
Message Information	✓	✓
Message Rewind/Pause/Fast Forward	✓	✓
New User Tutorial	✓	✓
Pager Notification	✓	✓
Reply to Sender	✓	✓
Send a Message Copy	✓	✓
Skip Greeting Message	✓	✓
Subscriber Outbound Calling	✓	✓
Message Recall	✓	✓
Recover Accidentally Deleted Messages	✓	✓
Private Messages	✓	✓
Urgent Messages	✓	✓
Supervisory Features		
Broadcast Message Capabilities	✓	✓
Call Log & Monitor	✓	✓
Class of Service Programming	✓	✓
Context-Sensitive Help Screens	✓	✓
Database Lookup	✓	✓
Database Lookup Macro Programming	✓	✓
Line Groups	✓	✓
Mailbox Setup Duplication	✓	✓
Advanced Features		
Interview/Question/Order Entry	✓	✓

4.2 Automatic Mailbox Login

When an extension user presses the “Voice Mail” button on his/her telephone, he/she will immediately be connected to his/her Mailbox, and will be asked to enter the password.

4.3 Call Forward to Personal Greeting

If an extension does not answer, and the extension user has set call-forward-no-answer to Voice Mail, then the caller will hear the personal greeting recorded by the Mailbox owner. If the Mailbox owner has recorded greeting #1, that greeting will be played in preference to the owner’s default greeting.

If an extension is busy, and the extension user has set call-forward-busy to Voice Mail, then the caller will hear the personal greeting recorded by the Mailbox owner. If the Mailbox owner has recorded greeting #2, that greeting will be played in preference to the owner's default greeting.

If an extension user has set call-forward-all to Voice Mail, then the caller will hear the personal greeting recorded by the Mailbox owner.

4.4 Recording a Call

An extension user can begin recording a call at any time by pressing the "Voice Record" button. Alternatively, an extension can be configured to record *all* calls automatically.

The DX-80 *Installation and Supervisor Guide* contains details on how to invoke and configure these features.

4.5 Transfer to Voice Mail

If an extension user is on a call, and wants the other party to leave a message for a specific Mailbox, he/she can press the "Voice Mail" button on the telephone, enter the number of the Mailbox which is to receive a message, and then hang up. If you have a DSS button on your phone for the extension that is to receive the message, you may also press that button instead of manually dialing the number.

- If the other party is on an extension, he/she will hear a beep, and can immediately begin recording.
- If the other party is external (i.e. on a CO line), he/she will hear the Mailbox owner's personal greeting.

4.6 Caller ID

If the system receives a call for which Caller ID information is available (i.e. internal call from an extension, or external call from a CO line that supports Caller ID), it will store the Caller ID, and use it as described in the DX-80 Installation Manual in the section dealing with Account Numbers. For example, if the caller records a message, the Caller ID information is stored along with a message and is repeated to the Mailbox owner when he/she listens to the message. The Mailbox owner is then offered the option to be automatically connected to the party who left the message.

4.7 UCD Integration

The DX-80 has built-in UCD capability. A UCD group can be set up, and calls can be routed to the UCD group without any involvement from the Voice Mail. This is completely separate and distinct from the ACD provided on the VP system.

When a call is sent to a DX-80 UCD group and all agents are busy, the DX-80 will queue the call, waiting for an agent to become available. When an agent becomes available, the DX-80 will send the call to that agent, causing his/her phone to ring. The Voice Mail is not involved at all. (In fact, there does not have to be a Voice Mail on the system.)

When the DX-80 queues a call while waiting for an agent to become available, the DX-80 can play its music-on-hold to the caller, but this is limited and cannot be modified. However, the DX-80 can conference in a voice mail port to the queued call. The DX-80 rings the voice mail port, sends the Voice Mail some information to specify which UCD queue the call is in, and lets the Voice Mail play voice messages to the caller while the call is in the DX-80 UCD queue.

The DX-80 will allow the Voice Mail to remain connected to the call until it sees that a DX-80 UCD agent has become available. As soon as an agent becomes available, the DX-80 will disconnect the Voice Mail and send the call to the agent. The Voice Mail will see that the call has disconnected and will return the voice mail port to idle.

During the time the Voice Mail is connected to the call, the caller will hear voice messages, and can respond by pressing digits. The Voice Mail implements this by sending the call to a Routing box, which plays the Routing box greeting, waits for digits, and moves to other boxes in the normal manner. This feature is best described using three examples:

- The simplest example would be a case in which the Voice Mail just provides music on hold. In this case, the Routing box greeting would be a short piece of music. The field labeled “If no digits dialed” would be set to “Hang up”. The “Destination for digit x” for all digits would be set to send the call back to this Routing box. This would cause the Voice Mail to keep play the music and then disconnect, leaving the caller connected to the DX-80 once more. This is how the system is configured on leaving the factory.
- Another example would be a case in which you want to allow the caller to hear information about different products while he/she is on hold. The Routing box greeting could be recorded as “While you are holding, to hear about our spring products, press 1, to hear about our summer products, press 2,” etc. The Routing box could route the call to another Routing box, depending on what the caller enters. This new Routing box could offer another menu, a product description, or other information as appropriate.
- Finally, to handle the case in which the caller decides not to continue in the DX-80 UCD queue and wants the auto-attendant features to route the call, the caller can tell the Voice Mail this by pressing 7. The Voice Mail determines how to handle the call using this logic: "If the Voice Mail is handling a call in a Routing box and the call came from the DX-80 as a UCD call, and the caller dials 7 and the “Destination for digit 7” is not set to a valid box number, then the Voice Mail will signal (by a double hookflash) to the DX-80 that the DX-80 should remove the call from the UCD queue and relinquish control of the call to the Voice Mail.

The Routing boxes for each UCD group are defined in TRANS.TXT file (see later section). By default, they are:

UCD Group Number	Purpose	Routing Box Used
1	Overflow announcement 1	3101
	Overflow announcement 2	3201
	Re-route announcement	3301
2	Overflow announcement 1	3102
	Overflow announcement 2	3202
	Re-route announcement	3302
This continues for groups 3 through 5…		

4.8 Call Forwarding

Depending on the transfer type selected, calls presented to a voice mail user can be forwarded to other extensions. See “Call Transfer Types”, below.

4.9 Call Transfer Types

Each mailbox setup screen includes a field to allow the selection of the transfer type. The transfer types include:

- No Transfer-The voice mail does not transfer the call. Instead, it plays the mailbox owner’s personal greeting.
- Blind-The voice mail transfers the call by dialing the number, then dropping out of the call.
- Wait for Answer-The VP system dials the number and monitors the line. If the called party is busy, the VP system offers the caller the options to hold.
- Wait for Ring-This is a combination of the Wait for Answer and Blind transfer types. If the called party is busy, the calling party is offered the same options as with the Wait For Answer type. If ringing is detected, the voice mail executes a blind transfer.
- Screen-This transfer type functions exactly the same way as the Wait for Answer type until the called party answers. Once the called party answers, the voice mail plays a system prompt offering the called party several options:
  - Press 1 to accept the call. The parties are connected.
  - Press 2 to have the voice mail play the box owners greeting.
  - Press 3 to send the calling party to the destination selected in the box setup screen.
  - Press 4 plus a greeting number (0-9) to play the selected greeting to the caller, provided that the greeting has been recorded.
  - Press 5 plus any valid box number to send the calling party to that box.
  - Press 6 to accept the call. The parties are connected, but the voice mail remains connected to the call and records the conversation.

4.10 Time/Day Announcements

By utilizing specific Routing Box Greetings, unique announcements can be played, depending on the time of day or day of the week.

4.11 Call Queuing

When the Screen transfer type is selected, the voice mail can perform call queuing if the extension is busy.

4.12 Multilingual Capability

Multilingual capability gives users the option of selecting a language other than English for the system prompts. By default, Spanish language prompts reside on the hard drive version of the Corporate Office DX (p/n 7270C). These prompts are activated by changing the value of the "*Languages=*" in the VM.CFG file to "*Languages=2*"

4.13 Optional Features

Corporate Office DX Voice Mail does not support Fax, Telemarketing, or Talking Classifieds.

5. CONFIGURING THE PHONE SYSTEM PROGRAMMING

This section contains general, step-by-step instructions on phone system programming. The steps are presented in their order of importance.

Note: When you receive a new Corporate Office DX, several sample databases are included on the CD that can be used as the basis for configuring the DX-80 programming. Refer to the document ***ReadMeFirst****, included on the* CD.

In addition to the required programming task of identifying the station ports as voice mail ports, there are several other programming considerations associated with the VP system operation that are optional for use as needed. You should make a record in the DX-80 system manual of all programming decisions you make; it will help you keep track of what you have done, and it will help you trouble-shoot any problem that might arise later.

Using voice mail enhances the DX-80 system significantly. The DX-80 will accommodate the following features:

- Automated Attendant
- Extension unique voice mailboxes
- Call Forward to extension voice mailboxes
- Answering Machine Emulation (Listen / Pick Up)
- UCD Queue Announcements
- Menu Routing
- Voice Record
- Automatic Voice Record
- Specific CO Line Greetings on Automated Attendant

5.1 Related Programming

- Extension – Record Allow, Predefined FWD
- Extension – No Answer Call Forward
- CO Line – Answering Position, Predefined FWD
- CO Line – Automatic CO Line Ringing Modes
- Extension Application – Voice Mail Table (only for external voicemail)
- Extension Application – UCD Group

5.2 Configuring the DX-80 for Voice Mail

Programming Abstract

- Set the Voice Mail Table to reference the UCD Group to be used for the Voice Mail ports. (Only for External voice mail.)
- Set the Voice Mail Dialing Ratio for suitable DTMF operation (if required).
- To activate Automated Attendant, set Answering Position to the UCD Group directory number coinciding with voice mail. (Usually "433" {Directory number 433 is associated with UCD Group 24.}) See CO Line Answering Position.

5.3 Programming via the DET (Digital Extension Terminal)

Note: When programming the system using the telephone instrument, the three buttons below the LCD display become interactive buttons. These buttons function as **`Back, Next, Show, Change,`** and **`Backspace.`**

You have the option of using the following sections, 4.3.1, 4.3.2, and 4.3.3 to manually create the hunt groups and assign the stations associated with the Voice Mail board. If you prefer, you can default the database with the Voice Mail board installed and the system will create these groups and extensions for you.

1. Enter Database Administration using the feature code [Feature]#* and then enter the DB Admin password "########." (Note: This eight-character password can be changed.)
2. Press [**show**]. The DB Item Select screen displays.
3. Input the code to go to the specific database item to change per the list:

The following entries are presented as they would be input. The syntax for the entry in the following example is aa-bbb-cc. Where,

aa=01 (extension port programming),

bbb=101~156 (analog port number,

cc=21 (value assigned).

This syntax applies to P*rogram Extension Port Type*. Other programming entries may include additional fields.

5.3.1 PROGRAM EXTENSION PORT TYPE

01-(157 thru 164)-21 (Extension "Port Type" where 157 thru 164 is the analog port)

1. Press [**save**]
2. Press [**chg**] until the port type "VM" displays for this extension.
3. Press the HOLD button to return to the previous menu level or press the VOLUME button to return to the DB Item Selection screen or to exit programming.

5.3.2 PROGRAM UCD GROUP MEMBERS

06-01-(01 thru 24)-03-01 (UCD Group "Members" where 01 thru 24 is the group number.)

1. Press [**save**]. This advances to Member #1 of the UCD Group selected.
2. Press [**chg**].
3. Input the extension directory of the analog port to program into this Member. (157-160 for 4 port system or 157-164 for 8 port system).
4. Press [**save**].
5. Press [**next**].
6. Continue from [**chg**] above to program all Voice Mail ports as member of this UCD Group.
7. Press the HOLD button to return to the previous menu level or press the VOLUME button to return to the DB Item Selection screen or to exit programming.

5.3.3 PROGRAM VOICE MAIL HUNT GROUP

06-02-(1 thru 3)-01 (Voice Mail Hunt Group, where 1 thru 3 is the Tenant Group {usually "1"})

1. Press [**save**]. This advances to Voice Mail Table for Tenant 1 – Hunt Group.
2. Press [**chg**] until the UCD Group to be used as the VM Hunt Group displays. (UCD Group where all of the VM type analog ports are programmed as Members.)
3. Press [**next**] to continue programming the various call handling digits (Prefix/Suffix).
4. Press the HOLD button to return to the previous menu level or press the VOLUME button to return to the DB Item Selection screen or to exit programming.

5.3.4 PROGRAM VM TABLES

06-02-(1 thru 3)-02-01 (VM Table – Prefix Table – ICM/VM, where 1 thru 3 = Tenant Group)

1. Press [**show**].
2. Press [**chg**].
3. Input the required digits to identify this call as originated at the subscriber phone.
4. Press [**save**].
5. Press [**next**] to continue programming the various call handling digits (Prefix/Suffix).
6. Press the HOLD button to return to the previous menu level or press the VOLUME button to return to the DB Item Selection screen or to exit programming.

06-02-(1 thru 3)-02-02 (VM Table – Prefix Table – Transfer, where 1 thru 3 = Tenant Group)

1. Press [**show**].
2. Press [**chg**].
3. Input the required digits to identify this call as transferred to this subscriber MB.
4. Press [**save**].
5. Press [**next**] to continue programming the various call handling digits (Prefix/Suffix).

6. Press the HOLD button to return to the previous menu level or press the VOLUME button to return to the DB Item Selection screen or to exit programming.

06-02-(1 thru 3)-02-02 (VM Table – Prefix Table – Busy FWD, where 1 thru 3 = Tenant Group)

1. Press [**show**].
2. Press [**chg**].
3. Input the required digits to identify this call as forwarded from this busy subscriber.
4. Press [**save**].
5. Press [**next**] to continue programming the various call handling digits (Prefix/Suffix).
6. Press the HOLD button to return to the previous menu level or press the VOLUME button to return to the DB Item Selection screen or to exit programming.

06-02-(1 thru 3)-02-02 (VM Table – Prefix Table – No Answer, where 1 thru 3 = Tenant Group)

1. Press [**show**].
2. Press [**chg**].
3. Input the required digits to identify this call as forwarded from this subscriber-no answer.
4. Press [**save**].
5. Press [**next**] to continue programming the various call handling digits (Prefix/Suffix).
6. Press the HOLD button to return to the previous menu level or press the VOLUME button to return to the DB Item Selection screen or to exit programming.

06-02-(1 thru 3)-02-02 (VM Table – Prefix Table – Direct, where 1 thru 3 = Tenant Group)

1. Press [**show**].
2. Press [**chg**].
3. Input the required digits to identify this call as immediately from this subscriber.
4. Press [**save**].
5. Press [**next**] to continue programming the various call handling digits (Prefix/Suffix).
6. Press the HOLD button to return to the previous menu level or press the VOLUME button to return to the DB Item Selection screen or to exit programming.

06-02-(1 thru 3)-02-02 (VM Table – Prefix Table – CO Greeting, where 1 thru 3 = Tenant Group)

1. Press [**show**].
2. Press [**chg**].
3. Input the required digits to identify this call to a specific CO Line.
4. Press [**save**].
5. Press [**next**] to continue programming the various call handling digits (Prefix/Suffix).
6. Press the HOLD button to return to the previous menu level or press the VOLUME button to return to the DB Item Selection screen or to exit programming.

06-02-(1 thru 3)-02-02 (VM Table – Prefix Table – CO Recall, where 1 thru 3 = Tenant Group)

1. Press [**show**].
2. Press [**chg**].
3. Input the required digits to identify this call as a specific CO Line recalling.
4. Press [**save**].
5. Press [**next**] to continue programming the various call handling digits (Prefix/Suffix).
6. Press the HOLD button to return to the previous menu level or press the VOLUME button to return to the DB Item Selection screen or to exit programming.

06-02-(1 thru 3)-02-02 (VM Table – Prefix Table – UCD Overflow, where 1 thru 3 = Tenant Group)

1. Press [**show**].
2. Press [**chg**].
3. Input the required digits to identify this call as a UCD Overflow Announcement.
4. Press [**save**].
5. Press [**next**] to continue programming the various call handling digits (Prefix/Suffix).
6. Press the HOLD button to return to the previous menu level or press the VOLUME button to return to the DB Item Selection screen or to exit programming.

06-02-(1 thru 3)-03 (VM Table – Suffix Digit, where 1 thru 3 = Tenant Group)

1. Press [**show**].
2. Press [**chg**].
3. Input the suffix digits if required to identify this call as the MB subscriber.
4. Press [**save**].
5. Press [**next**] to continue programming the various call handling digits (Prefix/Suffix).
6. Press the HOLD button to return to the previous menu level or press the VOLUME button to return to the DB Item Selection screen or to exit programming.

06-02-(1 thru 3)-03 (VM Table – Record Digit, where 1 thru 3 = Tenant Group)

1. Press [**show**].
2. Press [**chg**].
3. Input the digits required to active recording in this subscriber MB.
4. Press [**save**].
5. Press [**next**] to continue programming the various call handling digits (Prefix/Suffix).
6. Press the HOLD button to return to the previous menu level or press the VOLUME button to return to the DB Item Selection screen or to exit programming.

06-02-(1 thru 3)-03 (VM Table – Delete Digit, where 1 thru 3 = Tenant Group)

1. Press [**show**].
2. Press [**chg**].

3. Input the digits required to delete the current recording in this subscriber MB.
4. Press [**save**].
5. Press [**next**] to continue programming the various call handling digits (Prefix/Suffix).
6. Press the HOLD button to return to the previous menu level or press the VOLUME button to return to the DB Item Selection screen or to exit programming.

06-02-(1 thru 3)-03 (VM Table – Disconnect Digit, where 1 thru 3 = Tenant Group)

1. Press [**show**].
2. Press [**chg**].
3. Input the digits required to force disconnect of the active port.
4. Press [**save**].
5. Press [**next**] to continue programming the various call handling digits (Prefix/Suffix).
6. Press the HOLD button to return to the previous menu level or press the VOLUME button to return to the DB Item Selection screen or to exit programming.

03-33-01 (VM Dialing Ratio – Tone Time)

1. Press [**save**]. This advances to Call Handling – VM Dialing Ratio – Tone Time.
2. Press [**chg**] until the appropriate Tone Time displays. The recommended value is 60ms.
3. Press [**next**] to program Inter-Digit Time. Or…
4. Press the HOLD button to return to the previous menu level or press the VOLUME button to return to the DB Item Selection screen or to exit programming.

03-33-01 (VM Dialing Ratio – Inter-Digit Time)

1. Press [**save**]. This advances to Call Handling – VM Dialing Ratio – Inter-Digit Time.
2. Press [**chg**] until the appropriate Inter-Digit Time displays. The recommend value is 60ms.
3. Press the HOLD button to return to the previous menu level or press the VOLUME button to return to the DB Item Selection screen or to exit programming.

5.3.5 PROGRAM NO ANSWER CALL FORWARD

In software version F32 and later, the DX80 provides verification of a successful transfer back to the Corporate Office DX.

In order to use the Supervised Transfer/Call Screening features of the Corporate Office DX, the following DX80 programming requirements must be observed.

1. Any extension wishing to use these features must have the *Predef FWD Busy Dest* field set to NULL.
2. If the *Predef FWD NoAns Dest* is used, the *Predefined Forward Time* must exceed the value defined in the extension's mailbox *Number of Rings* parameter.

If you program CO Line Answering Position for incoming calls to be routed to a live attendant, you may want to set up No Answer Call Forward on the attendant's extension so that if the attendant is not available, incoming calls will be forwarded to the VP system.

To set up No Answer Call Forward:

1. Press [**next**]. The display will read:

   CALL FORWARD
   n_ans ext follow

2. Press [**n_ans**]. The display will read:

   NO_ANS FWD. _
   bksp save chg

3. Input the directory number (extension or Hunt Group) where calls are to be forwarded.
4. Press [**save**]. The display will show:

   NO_ANS FWD. XXX
   co icm/co icm

5. Select the type of calls to forward.
   - co = CO Line incoming or transferred calls
   - icm/co = both intercom and CO Line calls
   - icm = intercom calls only.

   You hear a confirmation tone, the extension returns to idle, and the Auxiliary Lamp is lit green. The display shows:

   NO_ANS TIME 1:10
   next chg

6. Press [**change**] to increase the time by 10-second increments. Change this setting to 1:20. This indicates that the first call to reach the attendant's extension will be routed to the VP system in 20 seconds.
7. Press [**next**]. The display will show:

   NO_ANS TIME 2:10
   chg

8. Press [**change**] to increase the time by 10-second increments. Change the time to 2:20. This setting will apply to subsequent incoming calls that reach the attendant's extension.
9. Go offhook and then back on hook to enable the No Answer Call Forward settings.

5.4 Programming the DX-80 via PC-DBA

Note: PC-DBA is a DOS-based programming utility.

You have the option of using the following sections, 3.2.3.1, 3.2.3.2, and 3.2.3.3 to manually create the hunt groups and assign the stations associated with the Voice Mail board. If you prefer, you can default the database with the Voice Mail board installed and the system will create these groups and extensions for you.

1. Enter PC-DBA by typing "**DX-80**" at the DOS prompt in the PC-DBA working directory and then pressing [**Enter**].
2. Press any key at the program title page (as it requests) to enter the Main Menu.

Figure 1-21 PC-DBA Main Menu Screen

3. Select *PC-DBA* from the main menu.
4. Select *Programming* from the PC-DBA menu. Then press [**Enter**].

5.4.1 PROGRAM EXTENSION PORT TYPE

1. Use the arrow keys to highlight "*Extension*." Then press [**Enter**].

2. Use the arrow keys to highlight "*Category 2*." Then press [**Enter**].

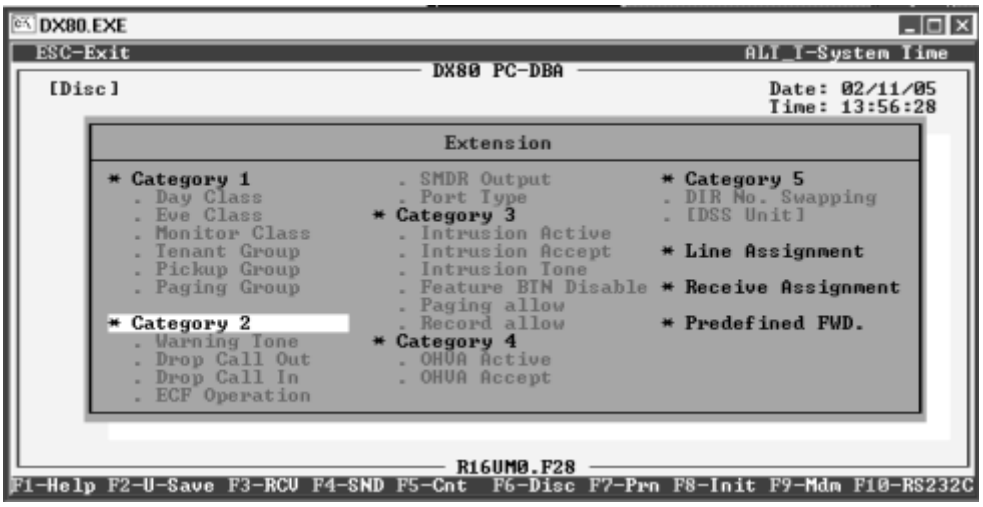


Figure 1-22 Configuring Extension Port Types

3. Use the arrow keys and [Page Up][Page Down] to highlight "Port Type" for the digital extension connected to VM (extensions 157-160 for 4 port system or 157-164 for 8 port system).

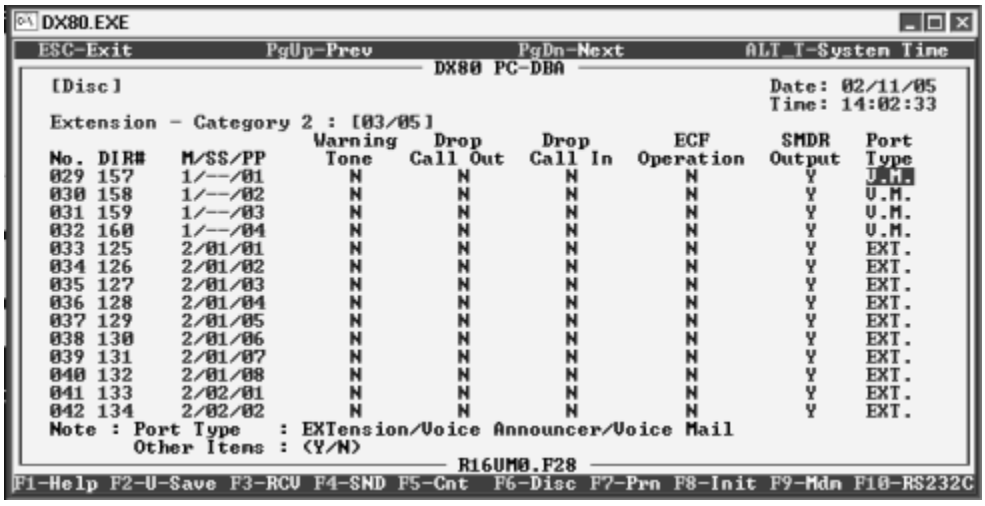

DX80.EXE
ESC-Exit
PgUp-Prev
PgDn-Next
ALT_I-System Time
DX80 PC-DBA
[Disc]
Date: 02/11/05
Time: 14:02:33
Extension - Category 2 : [03/05]
No. DIR# M/SS/PP Warning Tone Drop Call Out Drop Call In ECF Operation SMDR Output Port Type
029 157 1/--/01 N N N N Y V.M.
030 158 1/--/02 N N N N Y V.M.
031 159 1/--/03 N N N N Y V.M.
032 160 1/--/04 N N N N Y V.M.
033 125 2/01/01 N N N N Y EXT.
034 126 2/01/02 N N N N Y EXT.
035 127 2/01/03 N N N N Y EXT.
036 128 2/01/04 N N N N Y EXT.
037 129 2/01/05 N N N N Y EXT.
038 130 2/01/06 N N N N Y EXT.
039 131 2/01/07 N N N N Y EXT.
040 132 2/01/08 N N N N Y EXT.
041 133 2/02/01 N N N N Y EXT.
042 134 2/02/02 N N N N Y EXT.
Note : Port Type : EXTension/Voice Announcer/Voice Mail
Other Items : (Y/N)
R16UM0.F28
F1-Help F2-U-Save F3-RCV F4-SND F5-Cnt F6-Disc F7-Prn F8-Init F9-Mdm F10-RS232C

Figure 1-23 Selecting Port Types

4. Press [**Enter**] until Port Type "*VM*" displays.
5. Use the arrow keys and [Page Up][Page Down] to highlight "*Port Type*" for the next digital extension to program.
6. Press [**Enter**] until Port Type "*VM*" displays.
7. Continue until all analog extensions connected to VM are programmed.
8. When all changes are made press the [Escape] key to exit this database programming screen. You will see the prompt: "*Exit This Feature*"; press "**Y**" for yes.
9. You will then be prompted to "Save Current Setting?"

Press "**N**" to abort changes and leave all data unchanged.

Press "**Y**" to save changes.

10. If you press "**Y**" (yes), you will then be prompted "File Exists, Override?"

Press "**N**" to abort changes and leave all data unchanged.

Press "**Y**" (yes) to continue with the save operation.

11. Press [**Escape**] again to return to the Database Programming menu.

5.4.2 PROGRAM UCD GROUP MEMBERS

1. Use the arrow keys to highlight "*Extension Application*." Then press [**Enter**].

Figure 1-24 Extension Application Selection Screen

2. Use the arrow keys to highlight "*Uniform Call Distribution*." Then press [**Enter**].
3. Input the UCD Group to program as the VM Hunt Group (usually 24, which is associated with directory number 433). Then press [**Enter**].

Figure 1-25 UCD Group Number Input Screen

4. Use the arrow keys and [Page Up][Page Down] to highlight "Members" (extensions 157, 158, 159, 160 and 161, 162, 163, 164 if programming an 8 port system). Then press [**Enter**].

5. Use the arrow keys and [Page Up][Page Down] to highlight the member to program. Then press [**Enter**].

DX80.EXE
ESC-Exit
ALT T-System Time
DX80 PC-DBA
[Disc]
Date: 02/11/05
Time: 15:07:09
Uniform Call Distribution - Hunt Group Member : Hunt Group 24
Mem1 Mem2 Mem3 Mem4 Mem5 Mem6 Mem7 Mem8
157 158 159 160 NULL NULL NULL
Mem9 Mem10 Mem11 Mem12 Mem13 Mem14 Mem15 Mem16
NULL NULL NULL NULL NULL NULL NULL NULL
Mem17 Mem18 Mem19 Mem20 Mem21 Mem22 Mem23 Mem24
NULL NULL NULL NULL NULL NULL NULL NULL
Note : DIR No.
R16UM0.F28
F1-Help F2-U-Save F3-RCV F4-SND F5-Cnt F6-Disc F7-Prn F8-Init F9-Mdm F10-RS232C

Figure 1-26 Enter the UCD Group Members

6. Input the extension number of the digital port to program as this member of the VM UCD Group. Then press [**Enter**].
7. Continue until all analog extensions connected to VM are programmed.
8. When all changes are made press the [Escape] key to exit this database programming screen. You will see the prompt: "*Exit This Feature*"; press "**Y**" for yes.

DX80.EXE
ESC-Exit
ALT T-System Time
DX80 PC-DBA
[Disc]
Date: 02/11/05
Time: 15:09:37
Uniform Call Distribution - Hunt Group Member : Hunt Group 24
Mem1 Mem2 Mem3 Mem4 Mem5 Mem6 Mem7 Mem8
157 158 159 160 161 162 163 164
Mem9 Mem10 Mem11 Mem12 Mem13 Mem14 Mem15 Mem16
NULL NULL NULL NULL NULL NULL NULL NULL
Mem17 Mem18 Mem19 Mem20 Mem21 Mem22 Mem23 Mem24
NULL NULL NULL NULL NULL NULL NULL NULL
Exit This Feature ? (Y/N)
Note : DIR No.
R16UM0.F28
F1-Help F2-U-Save F3-RCV F4-SND F5-Cnt F6-Disc F7-Prn F8-Init F9-Mdm F10-RS232C

Figure 1-27 Exit and Save

9. You will then be prompted to "*Save Current Setting*?"

Press "**N**" to abort changes and leave all data unchanged.

Press "**Y**" to save changes.

10. If you press "**Y**" (yes), you will then be prompted "*File Exists, Override?*"

Press "**N**" to abort changes and leave all data unchanged.

Press "**Y**" (yes) to continue with the save operation.

11. Press [**Escape**] again to return to the Database Programming menu.

5.4.3 PROGRAM VOICE MAIL HUNT GROUP AND CALL HANDLING DIGITS

1. Use the arrow keys to highlight "*Extension Application*." Then press [**Enter**].
2. Use the arrow keys to highlight "*Voice Mail Table*." Then press [**Enter**].

Figure 1-28 Voice Mail Table Selection Screen

3. Use the arrow keys to highlight the Tenant Group to program (usually "1"). Then press [**Enter**].
4. Continue pressing [**Enter**] until the selected UCD Group number displays (usually 24, associated with directory number 433).

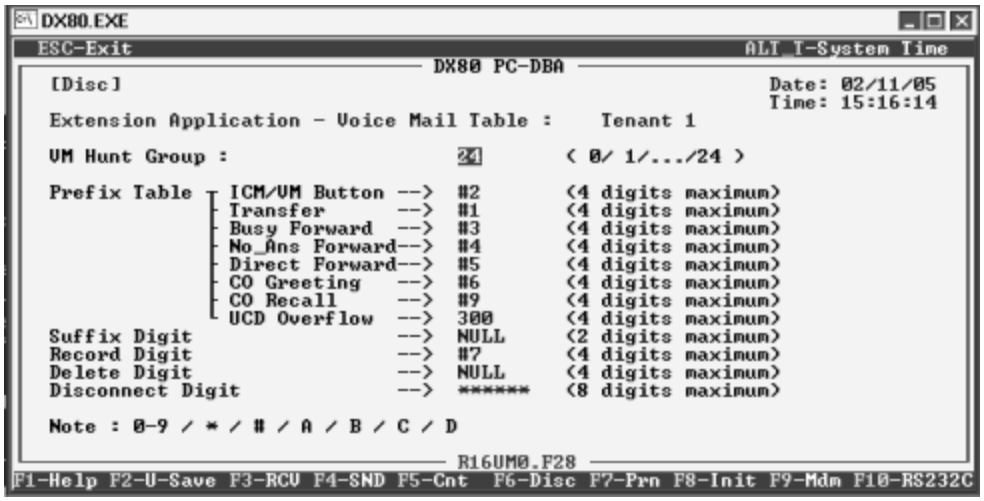

DX80.EXE
ESC-Exit
ALT_I-System Time
DX80 PC-DBA
[Disc]
Date: 02/11/05
Time: 15:16:14
Extension Application - Voice Mail Table : Tenant 1
VM Hunt Group : 24 (0/ 1/.../24)
Prefix Table ICM/VM Button --> #2 (4 digits maximum)
Transfer --> #1 (4 digits maximum)
Busy Forward --> #3 (4 digits maximum)
No_Ans Forward--> #4 (4 digits maximum)
Direct Forward--> #5 (4 digits maximum)
CO Greeting --> #6 (4 digits maximum)
CO Recall --> #9 (4 digits maximum)
UCD Overflow --> 300 (4 digits maximum)
Suffix Digit --> NULL (2 digits maximum)
Record Digit --> #7 (4 digits maximum)
Delete Digit --> NULL (4 digits maximum)
Disconnect Digit --> ****** (8 digits maximum)
Note : 0-9 / * / # / A / B / C / D
R16UM0.F28
F1-Help F2-U-Save F3-RCV F4-SND F5-Cnt F6-Disc F7-Prn F8-Init F9-Mdm F10-RS232C

Figure 1-29 Call Handling Digit Entry

5. Use the arrow keys to highlight the call handling digit parameter to program. Then press [**Enter**].
6. Input the digit string for the selected call type. Then press [**Enter**].
7. Continue until all programming is complete.
8. When all changes are made press the [**Escape**] key to exit this database programming screen. You will see the prompt: "*Exit This Feature*"; press "**Y**" for yes.

9. You will then be prompted to "*Save Current Setting?*"

   Press "**N**" to abort changes and leave all data unchanged.

   Press "**Y**" to save changes.

10. If you press "**Y**" (yes), you will then be prompted "*File Exists, Override?*"

    Press "**N**" to abort changes and leave all data unchanged.

    Press "**Y**" (yes) to continue with the save operation.

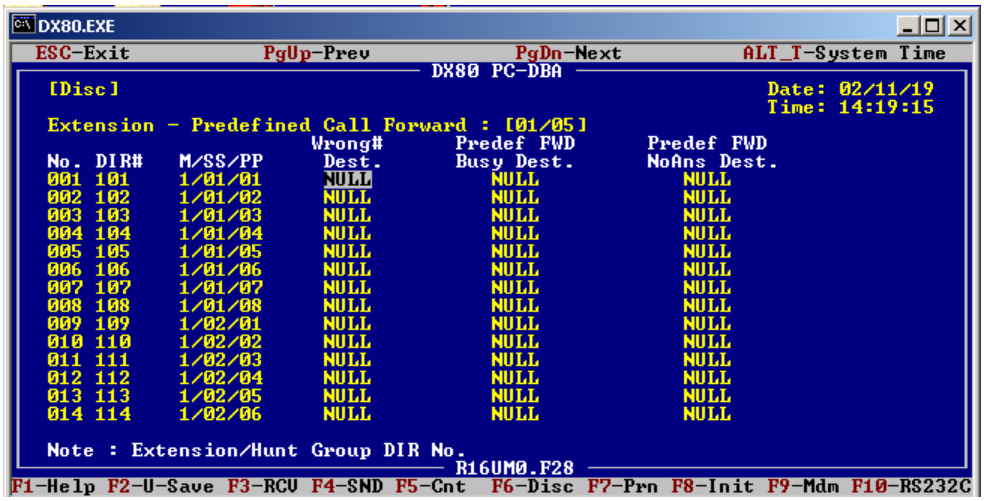
11. Press [**Escape**] again to return to the Database Programming menu.

5.4.4 PROGRAM PREDEFINED CALL FORWARD MODES

In software version F32 and later, the DX80 provides verification of a successful transfer back to the Corporate Office DX.

In order to use the Supervised Transfer/Call Screening features of the Corporate Office DX, the following DX80 programming requirements must be observed.

1. Any extension wishing to use these features must have the *Predef FWD Busy Dest* field set to NULL.
2. If the *Predef FWD NoAns Dest* is used, the *Predefined Forward Time* must exceed the value defined in the extension's mailbox *Number of Rings* parameter.


DX80.EXE
ESC-Exit PgUp-Prev PgDn-Next ALT_T-System Time
DX80 PC-DBA
[Disc]
Date: 02/11/19
Time: 14:19:15
Extension - Predefined Call Forward : [01/05]
No. DIR# M/SS/PP Wrong# Dest. Predef FWD Busy Dest. Predef FWD NoAns Dest.
001 101 1/01/01 NULL NULL NULL
002 102 1/01/02 NULL NULL NULL
003 103 1/01/03 NULL NULL NULL
004 104 1/01/04 NULL NULL NULL
005 105 1/01/05 NULL NULL NULL
006 106 1/01/06 NULL NULL NULL
007 107 1/01/07 NULL NULL NULL
008 108 1/01/08 NULL NULL NULL
009 109 1/02/01 NULL NULL NULL
010 110 1/02/02 NULL NULL NULL
011 111 1/02/03 NULL NULL NULL
012 112 1/02/04 NULL NULL NULL
013 113 1/02/05 NULL NULL NULL
014 114 1/02/06 NULL NULL NULL
Note : Extension/Hunt Group DIR No.
R16UM0.F28
F1-Help F2-U-Save F3-RCV F4-SND F5-Cnt F6-Disc F7-Prn F8-Init F9-Mdm F10-RS232C

Note: Using the Supervised Transfer with Auto Attendant feature precludes you from forwarding intercom calls to voice mail.

5.4.5 PROGRAM VOICE MAIL DIALING RATIO

1. Use the arrow keys to highlight "*Call Handling*." Then press [**Enter**].

Figure 1-30 Call Handling Menu Selection

2. Use the arrow keys to highlight "*Category 3*." Then press [**Enter**].
3. Use the arrow keys to highlight VM Dialing Ratio – Tone Time or Inter-Digit Time. Make certain that 60 (milliseconds) displays in each of these fields. Then press [**Enter**].

DX80.EXE
ESC-Exit
ALT_T-System Time
DX80 PC-DBA
[Disc]
Date: 02/11/05
Time: 15:30:33
Call Handling - Category 3 :
Dial Delay Time : 100 (100/500/1000/1500/2000) ms
Camp On Interval : 20 (0/10/20/../60) sec
Extenion Alarm Play Time : 30 (10/30/60/120../540/600) sec
Hotel Enable : N (Y/N)
Sys SPD. Toll Check : N (Y/N)
ISI Connect Enable : Y (Y/N)
Conference Tone : Y (Y/N)
Call Duration Time : 10 (1/2/3/.../25) sec
VM Dialing Ratio-Tone Time : 60 (60/90/120/150) ms
Int_Dgt Time : 60 (60/90/120/150) ms
VM Monitor Time : 10 (10/20/30/40/50/60) sec
VM Reserve Port : 0 (0/1/2/.../99)
FAX Ring Time : 10 (10/20/.../60) sec
Predefined Forward Time : 10 (6/8/.../30) sec
F1-Help F2-U-Save F3-RCV F4-SND F5-Cnt F6-Disc F7-Prn F8-Init F9-Mdm F10-RS232C

Figure 1-31 VM Dialing Ratio Entry

5.4.6 PROGRAM PREDEFINED FORWARD TIME

1. Use the arrow keys to highlight "*Predefined Forward Time*."

2. Press [**Enter**] until the appropriate time displays. (The default is 10 seconds.) In the following example, the predefined forward time has been changed to 20 seconds.

DX80.EXE
ESC-Exit
ALI T-System Time
DX80 PC-DBA
[Disc]
Date: 02/11/05
Time: 15:41:26
Call Handling - Category 3 :
Dial Delay Time : 100 (100/500/1000/1500/2000) ms
Camp On Interval : 20 (0/10/20/../60) sec
Extenion Alarm Play Time : 30 (10/30/60/120../540/600) sec
Hotel Enable : N (Y/N)
Sys SPD. Toll Check : N (Y/N)
ISI Connect Enable : Y (Y/N)
Conference Tone : Y (Y/N)
Call Duration Time : 10 (1/2/3/.../25) sec
VM Dialing Ratio─┬─Tone Time : 60 (60/90/120/150) ms
└─Int_Dgt Time : 60 (60/90/120/150) ms
VM Monitor Time : 10 (10/20/30/40/50/60) sec
VM Reserve Port : 0 (0/1/2/.../99)
FAX Ring Time : 10 (10/20/.../60) sec
Predefined Forward Time : 20 (6/8/.../30) sec
F1-Help F2-U-Save F3-RCV F4-SND F5-Cnt F6-Disc F7-Prn F8-Init F9-Mdm F10-RS232C

Figure 1-32 PreDefined Forward Time Entry

3. When all changes are made, press the [**Escape**] key to exit this database programming screen. You will see the prompt: "*Exit This Feature*"; press "**Y**" for yes.
4. You will then be prompted to "Save Current Setting?"

   Press "**N**" to abort changes and leave all data unchanged.

   Press "**Y**" to save changes.
5. If you press "**Y**" (yes), you will then be prompted "*File Exists, Override***?**"

   Press "**N**" to abort changes and leave all data unchanged.

   Press "**Y**" (yes) to continue with the save operation.
6. Press [**Escape**] again to return to the Database Programming menu.
7. Continue making other programming changes or exit PC-DBA programming.

5.4.7 PROGRAM AUTOMATIC CO LINE RINGING MODES

1. Use the arrow keys to highlight "*System Application*" and then press [**Enter**].

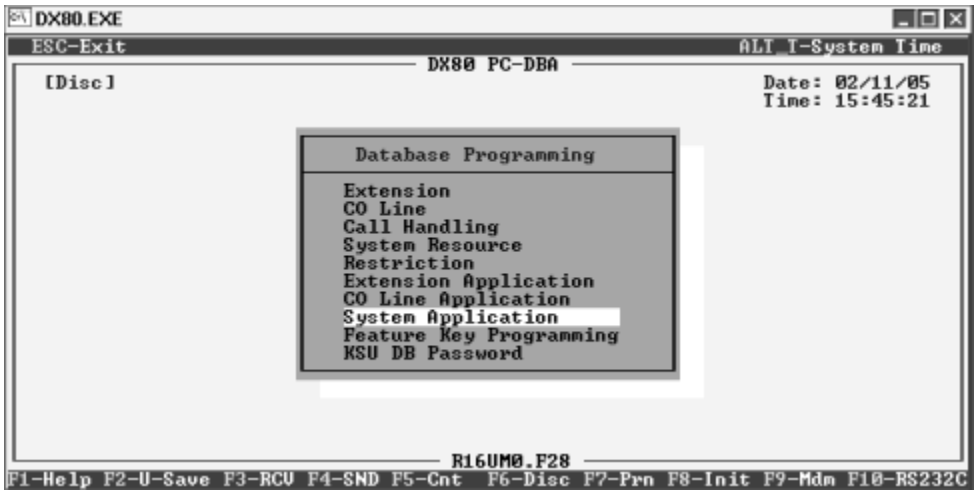


Figure 1-33 System Application Selection

2. Use the arrow keys to highlight "*Time Switching*" and then press [**Enter**].
3. Use the arrow keys to highlight the Alternate (Alt) Service Mode. (This screen is read as "*FROM*" and "*TO*" for each day of the week and for the switch modes Alternate (Alt) and Evening (Eve). There are also the three groups for each of the Tenant Groups.)

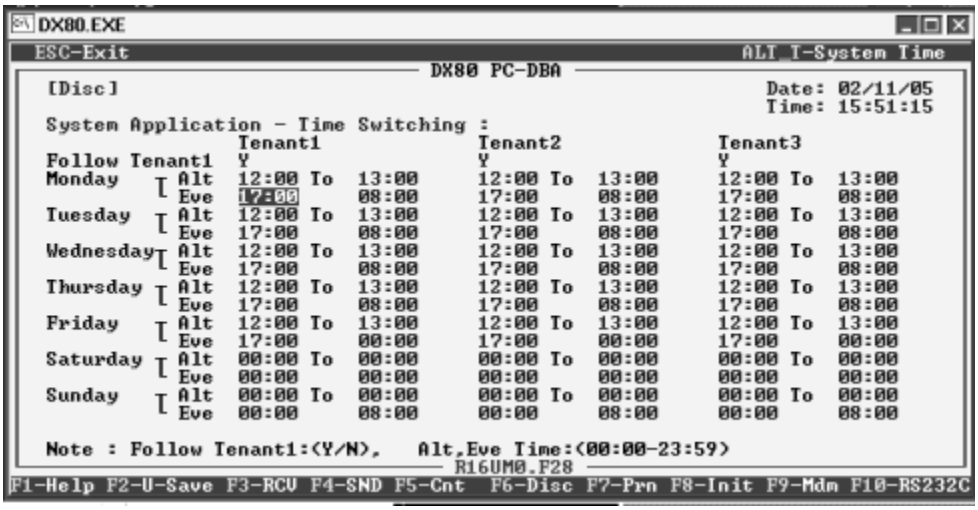


Figure 1-34 Time Switching Entry Screen

4. Press [**Enter**].
5. The Alternate service mode cannot be used with an external voice mail system. To disable the Alternate service mode, in the Alt fields input 00:00 as the time when this service mode should become active (left column) and 00:00 as the time when it should stop being active (right column). When the times have been input, press [**Enter**] to store.
6. Use the arrow keys to highlight the Evening (*Eve*) Service Mode and press [**Enter**].

7. In the Eve fields, input new beginning and end times for the Evening service mode if the defaults of 17:00 (5:00 PM) and 08:00 (8:00 AM) are not appropriate. When the times have been input, press [**Enter**] to store.
8. When all changes are made, press the [**Escape**] key to exit this database programming screen. You will see the prompt: "*Exit This Feature*"; press "**Y**" for yes.
9. You will then be prompted to "*Save Current Setting*?"

Press "**N**" to abort changes and leave all data unchanged.

Press "**Y**" to save changes.

10. If you press "**Y**" (yes), you will then be prompted "*File Exists, Override***?**"

Press "**N**" to abort changes and leave all data unchanged.

Press "**Y**" (yes) to continue with the save operation.

11. Press [**Escape**] again to return to the Database Programming menu.
12. Continue making other programming changes or exit PC-DBA programming.

5.4.8 PROGRAM CO LINE ANSWERING POSITION

1. Use the arrow keys to highlight "*CO Line*." Then press [**Enter**].

Figure 1-35 CO Line Selection Screen

2. Use the arrow keys to highlight "*Answering Position*." Then press [**Enter**].
3. Use the arrow keys to highlight the Day or Evening ringing destination for the CO Line (CO Line numbers are listed vertically along the left side of the screen). Then press [**Enter**].

4. Input the CO Line, Hunt Group or Virtual Number directory number where ringing for this CO Line is to be assigned. If you want incoming calls to be routed to a live attendant, enter the extension number for that attendant in the appropriate fields (Day and/or Evening). If you want incoming calls to be routed to the VP system's Auto Attendant, enter the UCD Group directory number associated with the voice mail ports (usually always 433, associated with UCD Group 24). (See ***Program No Answer Call Forward*** in the Programming via the DET section of these instructions for important related programming.)

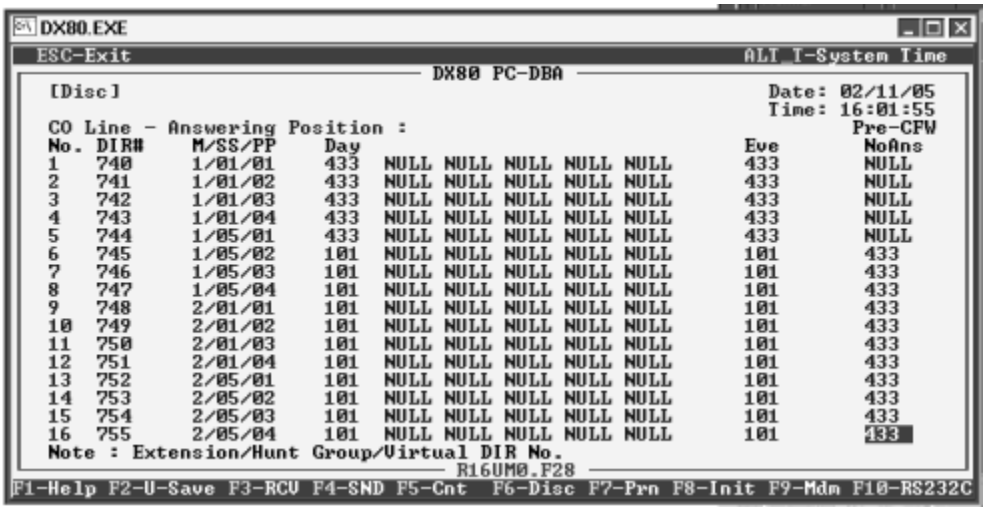

DX80.EXE
ESC-Exit
ALT_T-System Time
DX80 PC-DBA
[Disc]
Date: 02/11/05
Time: 16:01:55
CO Line - Answering Position :
No. DIR# M/SS/PP Day Eve Pre-CFW NoAns
1 740 1/01/01 433 NULL NULL NULL NULL NULL 433 NULL
2 741 1/01/02 433 NULL NULL NULL NULL NULL 433 NULL
3 742 1/01/03 433 NULL NULL NULL NULL NULL 433 NULL
4 743 1/01/04 433 NULL NULL NULL NULL NULL 433 NULL
5 744 1/05/01 433 NULL NULL NULL NULL NULL 433 NULL
6 745 1/05/02 101 NULL NULL NULL NULL NULL 101 433
7 746 1/05/03 101 NULL NULL NULL NULL NULL 101 433
8 747 1/05/04 101 NULL NULL NULL NULL NULL 101 433
9 748 2/01/01 101 NULL NULL NULL NULL NULL 101 433
10 749 2/01/02 101 NULL NULL NULL NULL NULL 101 433
11 750 2/01/03 101 NULL NULL NULL NULL NULL 101 433
12 751 2/01/04 101 NULL NULL NULL NULL NULL 101 433
13 752 2/05/01 101 NULL NULL NULL NULL NULL 101 433
14 753 2/05/02 101 NULL NULL NULL NULL NULL 101 433
15 754 2/05/03 101 NULL NULL NULL NULL NULL 101 433
16 755 2/05/04 101 NULL NULL NULL NULL NULL 101 433
Note : Extension/Hunt Group/Virtual DIR No.
R16UM0.F28
F1-Help F2-U-Save F3-RCV F4-SND F5-Cnt F6-Disc F7-Prn F8-Init F9-Mdm F10-RS232C

Figure 1-36 CO Line Answering Position Entry

5. In the example, the first five lines will be answered by the auto attendant and the other lines will be answered by the live attendant. The latter lines will also go to the auto attendant in cases where the attendant is busy. This is accomplished by entering the group number in the Pre-CFW field.
6. Press [**Enter**] after each entry. Each database item is temporarily stored.
7. Use the arrow keys to highlight the next ringing destination to be programmed.
8. Repeat the programming process for all CO Lines and destinations for the mode (Day/Evening).
9. When all changes are made, press the [**Escape**] key to exit this database programming screen. You will see the prompt: "***Exit This Feature***"; press "**Y**" for yes.
10. You will then be prompted to "***Save Current Setting***?"

    Press "**N**" to abort changes and leave all data unchanged.

    Press "**Y**" to save changes.
11. If you press "**Y**" (yes), you will then be prompted "*File Exists, Override***?**"

    Press "**N**" to abort changes and leave all data unchanged.

    Press "**Y**" (yes) to continue with the save operation.
12. Press [**Escape**] again to return to the Database Programming menu.
13. Continue making other programming changes or exit PC-DBA programming.

Note: *Changes made via PC-DBA are not updated to the DX-80 memory until a "SEND" function has been performed. Please refer to the* DX-80 Technical Manual, Volume II, Programming *to learn more about this procedure.*

6. CORPORATE OFFICE DX SETUP

The Voice Mail card contains a default database with a setup configuration that allows the Voice Mail to efficiently perform fundamental call processing tasks with minimal system adjustments by the installing technician. This default database configuration includes 2 pre-defined classes of service (0 and 7), 1 supervisor mailbox (mailbox 70), and 3 Routing boxes—800, 801, 821. Information provided in this document explain how these pre-set defaults function on the Voice Mail.

As you proceed through these setup instructions, you may decide to make adjustments to specific information relating to the default setup. You may even decide to set up the other 2 available Routing boxes to perform additional call routing tasks. As you make any changes, keep in mind that we urge you to maintain the initial general configuration of Routing boxes 800, 801, and 821, class of service 7, and supervisor mailbox 70. This configuration allows the Voice Mail to perform fundamental call processing tasks efficiently. Maintaining it helps both you, the technician, and Voice Mail technical support to efficiently service the system and resolve any call processing issues. For these reasons we urge you not to deviate from this general system setup default configuration**.**

> **Note:** Section 5.1 provides an overview of the default database setup shipped on the Voice Mail.

6.1 Default Database Structure Overview

As mentioned previously, the Voice Mail contains a default database with a setup configuration that allows the Voice Mail to efficiently perform fundamental call processing tasks with minimal system adjustments by the installing technician. Information in this section highlights portions of this default database configuration. More detailed information on the purpose of Routing boxes and mailboxes and how box settings and other default settings affect system functionality is provided earlier in this document.

> **Note:** Though you may make adjustments to specific information relating to this default setup, **you are urged to maintain the general configuration of Routing boxes 800, 801, and 821, class of service 7, and supervisor mailbox 70**. This configuration allows the Voice Mail to efficiently perform fundamental call processing tasks. Maintaining it helps both you, the technician, and the Voice Mail technical support to efficiently service the system and resolve any call processing issues.

Default Database Settings

Database Item	Default Setting
Technician Password	1234
Business Hours	8:00am - 5:00pm
Routing Box 800	• Answers All Calls During Day/lunch Hours • Owned By Mailbox 70

Database Item	Default Setting
Routing Box 801	• Answers All Calls During Non-day/ lunch Hours • Owned By Mailbox 70
Routing Box 821	• Routes Calls That Have Already Passed Through Box 800 Or 801 • Owned By Mailbox 70
Class Of Service 0	Set Up With The Following Parameter Settings:
Maximum Number Of Greetings	10
Maximum Number Of Messages	200
Maximum Greeting Length (Secs)	60
Maximum Message Length (Secs)	60
Auto-delete Old Messages After	30 Days
Auto-delete New Messages After	99 Days
Supervisor Status	No
Access To Group Boxes	Yes
Dial Out Allowed	No
Access To Pa	Yes
Play Menu After Greeting	No
Allowed To Receive Fax Mail	No
Operator Box (Day)	888
Operator Box (Night)	888
When Exiting Open Mailbox, Go To Box	821
Max Lines Allowed To Hold For One Box	2
While In Queue, Say Position In Line?	No
Try Extension Before Going Back To Caller	3 Times
Restricted Digits	None
Class Of Service 7	Set Up With The Same Options As Cos 0, But With Supervisor Status **Enabled**.
Extension Length	3 Digits
Password Length	4 Digits
Default Password	Same As Mailbox Number
Mailbox 70	Supervisor’s Mailbox With Cos 7
Prototype Mailbox 9994	Features Automatically Assigned To All Mailboxes Created.
Transfer Type	Wait For Ring
Class Of Service	0

Database Item	Default Setting
To: X	Signifies The Mailbox Number
Currently Enabled	Yes
Transfer Schedule	Always
Password	Mailbox Number
Sequence To Turn On/off Message Waiting Lamp	Set By Integration Program
After Playing Greeting	Wait For Digit

6.2 Available Setup Technique

There are two techniques you can use to set up Voice Mail:

- Attach a laptop to the Voice Mail card and use the program's screen interface to complete System Information and Box Setup screens
- Call into the Voice Mail and use the Teleparameter feature to enter parameter codes and corresponding values to set up system and box information

This document provides instructions for using either system setup technique.

Technicians who have experience setting up Corporate Office or Small Office systems may prefer to use the Teleparameter feature to quickly make modifications and get the Voice Mail up and running at the customer's site. Be advised, however, that since this technique involves inputting codes that represent system parameters and corresponding values to which parameters are to be set, it is a bit more difficult to use effectively if you are unfamiliar with setting up Corporate Office or Small Office. For this reason, we recommend that technicians unfamiliar with Corporate Office, Small Office, or DX-80 Corporate Office DX Voice Mail attach a laptop to the Voice Mail and use the instructions provided here to complete all necessary system setup steps through the screen interface

Note: If you choose to set up the system using the Teleparameter feature, be sure to first review section 5.5 so you clearly understand the setup of the default database included on the Voice Mail. The Teleparameter codes are located in Appendix A.

6.3 Preparing for Setup

To install, set up, and maintain a DX-80 Corporate Office DX Voice Mail voice processing system, you need the following equipment:

Equipment Needed

- DX-80 Corporate Office DX Voice Mail card

If you choose to set up the system by connecting a laptop to the Voice Mail card, you need the following additional equipment.

- Laptop computer
- Straight through serial cable

- KeyLink communications software (provided with all Voice Mail cards)

Note: Refer to Section 2.10 for instructions on communicating with the system using KeyLink.

This equipment is necessary because the Voice Mail does not have a keyboard and monitor. To set up the system using a laptop, you must use a Straight through serial cable to attach the laptop PC to the Voice Mail card. So that the laptop computer can communicate with the Voice Mail, you must install KeyLink communication software, provided with the Voice Mail, onto the laptop PC. The KeyLink installation procedure is provided in this document.

Once the system is set up and tested, the system supervisor on-site can maintain the day-to-day aspects of the system (adding, deleting, modifying mailboxes; modifying greetings and call routing; etc.) by simply calling into the system using a telephone. The laptop computer is not required for regular daily maintenance of the Voice Mail.

Typical Setup

For typical automated attendant service, the phone system is programmed so that incoming calls are routed via the phone system to ring the Voice Mail. The Voice Mail answers the call and asks the caller to enter the required extension (or mailbox) number. The caller enters the number, and the Voice Mail transfers the call, just as a live attendant would.

6.4 Collecting Necessary Customer Information

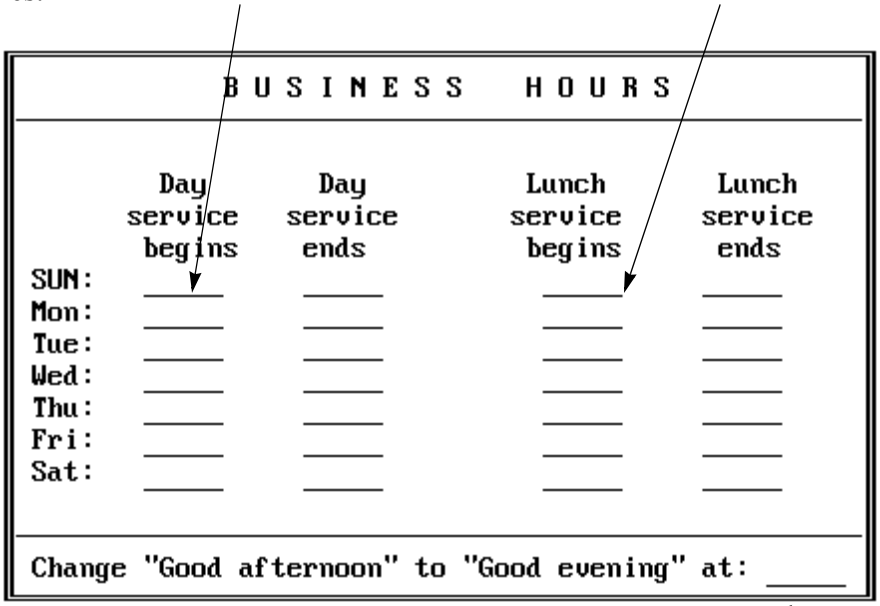
While setting up the Voice Mail, you may need to adjust default settings for the customer's regular business open hours and business closed hours. You also need to set up Routing boxes to handle incoming calls and set up mailboxes for subscribers who will be using the system. The following worksheets are provided to help the installing technician collect this information from the system supervisor.

Business Hours Worksheet

(System Supervisor Completes)

On the lines corresponding to each day of the week, write in 24-hour format the normal hours the company opens and closes for business. For 24-hour operation, enter 0:00 for Day Service Begins and 24:00 as Day Service Ends time. If the business is closed the entire day, enter 0:00 on both lines.

Indicate, if appropriate, any hour(s) the business is closed during the day for lunch or any other reason.



Specify the time of day the automated attendant should start answering calls with a "good evening" greeting.

Subscriber Mailbox Information Worksheet

(System supervisor completes for each mailbox subscriber)

Subscriber Data	
First name:	
Last name:	
Extension number:	
Should the system announce the caller's name to the subscriber upon transfer?	
Should all conversations be recorded?	
Paging Data	(complete only if subscriber is to use the feature)
Pager number	
Pager type (circle one)	TONE DIGITAL
Paging schedule (circle one)	Always During office open hours During closed hours Schedule*: A B C D
Auto Message Forward and Message Delivery Data	(complete only if subscriber is to use these features)
Auto forward new messages:	To box:_____ After _____hours
Auto forward new messages schedule (circle one):	Always During office open hours During closed hours Schedule*: A B C D
Message delivery schedule 1: When should deliver be active? (circle one):	Number to call:_____ Always During office open hours During closed hours Schedule*: A B C D
Message delivery schedule 2: When should delivery be active? (circle one):	Number to call:_____ Always During office open hours During closed hours Schedule*: A B C D
Message delivery schedule 3: When should delivery be active? (circle one):	Number to call:_____ Always During office open hours During closed hours Schedule*: A B C D
Message delivery schedule 4: When should delivery be active? (circle one):	Number to call:_____ Always During office open hours During closed hours Schedule*: A B C D
Message delivery schedule 5: When should delivery be active? (circle one):	Number to call:_____ Always During office open hours During closed hours Schedule*: A B C D

*If specifying a particular schedule, complete a subscriber schedule worksheet for the individual.

Subscriber Schedule Worksheet

(System Supervisor Completes)

Photocopy this page, then complete the form for each subscriber who is using the Paging, Auto Message Forwarding, or Message Delivery out-calling features according to a particular schedule, as indicated on his/her Subscriber Mailbox Information sheet.

You can designate up to 4 different schedules below, then apply one schedule to each out-calling feature the subscriber will be using. Enter information for 1 to 4 schedules below in 24-hour format (for example 8:00 PM is 20:00). You do not need to complete the **BOX NUMBER** field.

M A I L B O X Page 3

Box number:____ First Name:_____ Last:_____

SCHEDULE A	Start	End	SCHEDULE B	Start	End
SUN:	_____	_____	Sun:	_____	_____
Mon:	_____	_____	Mon:	_____	_____
Tue:	_____	_____	Tue:	_____	_____
Wed:	_____	_____	Wed:	_____	_____
Thu:	_____	_____	Thu:	_____	_____
Fri:	_____	_____	Fri:	_____	_____
Sat:	_____	_____	Sat:	_____	_____
SCHEDULE C	**Start**	**End**	**SCHEDULE D**	**Start**	**End**
Sun:	_____	_____	Sun:	_____	_____
Mon:	_____	_____	Mon:	_____	_____
Tue:	_____	_____	Tue:	_____	_____
Wed:	_____	_____	Wed:	_____	_____
Thu:	_____	_____	Thu:	_____	_____
Fri:	_____	_____	Fri:	_____	_____
Sat:	_____	_____	Sat:	_____	_____

Routing Worksheet (System Supervisor Completes)

Refer to **section 3.2** to familiarize yourself with the function of Routing boxes. This section also provides a sample of greetings that are typically recorded in the 3 Routing boxes pre-configured on the Voice Mail. After reviewing this information, complete this worksheet to indicate the wording for the greetings you want this Voice Mail to voice.

Note that you should indicate in your greeting any single-digit call routing options you want to provide to callers (*"...Press 2 for Sales..."*) and identify the extension to which a caller pressing that single-digit number should be transferred.

Office Open Greeting:

Single digit routing paths:

Office Closed Greeting:

Continued on back

Single digit routing paths:

Office Holiday Greeting:

Single digit routing paths:

6.5 Setting up the System

Because the integration parameters are pre-set before the Voice Mail leaves the factory, once you access the Voice Mail using a laptop computer, you are ready to begin customizing the system. Customizing the system involves:

- Specifying System Information
- Specifying Routing Box and Mailbox Information

6.5.1 SPECIFYING SYSTEM INFORMATION

System Information screens contain system setup information that applies system-wide, to all boxes set up on the system. There are six System Information screens:

- General Information Screen
- Line Information Screen
- Business Hours Screen
- Call Transfer Screen
- Class of Service Screen(s)
- Other Customizations Screen

Before you set up Routing boxes and mailboxes, it is best to ensure all System Information screens are properly completed.

> **Note**: Because the default information on System Information screens is set so the Voice Mail is operational with as few changes as possible, the procedures provided in this document for entering data on System Information screens do not go into detail about all the screen entries. Instead, the procedures guide you through accessing and reviewing pertinent fields on certain screens, so you can verify that default data is properly set and modify it if absolutely necessary.
> Note that you can access online help at any time by pressing <F1>.

6.5.1.1 Accessing System Information Screens

1. From the Line Status screen, **press <F10>**. The Main menu displays, and you are prompted to enter a system password.
2. At the prompt to enter the system password, press <Enter>. (The default Customer level password is blank. The default Technician level password is **1234**.)
3. From the Main Menu, select **SYSTEM INFORMATION**. The System Information menu displays.

6.5.1.2 Setting Up the General Information Screen

1. From the System Information menu, select **GENERAL**. The General Information setup screen displays.
2. Press <Enter> to move the cursor to the **AUTOMATICALLY EXIT TO DOS AT** field. **Enter the time** at which the Voice Mail should exit to DOS to perform its auditing functions. The default setting is 3:00 AM.
3. To save the information and exit the screen, **press <F10>**. The System Information menu displays.

6.5.1.3 Setting Up the Line Information Screen

1. From the System Information menu, select **LINE INFORMATION**. The Line Information setup screen displays. Each row on this screen corresponds to one line connected to the Voice Mail.
2. Press <Enter> to move the cursor to the Initial Box field under Day Service for line 1. Verify that **800** displays in this field, indicating that calls received during Day Service hours are to go to Routing box 800.
3. Press <Enter> to move the cursor to Initial Box field under Night Service for line 1. Verify that **801** displays in this field, indicating that calls received after the day service hours are to go to Routing box 801.
4. Press <Enter> to move the cursor to the Initial Box field under Lunch Service for line 1. Verify that **800** displays in this field, indicating that calls received during Lunch Service are also to go to Routing box 800.
5. Press <Enter> to move the cursor to the **OUTGOING ALLOWED** field for line 1. Verify this field is set to **No**.
6. Repeat steps 3 through 5 for each line on the screen. For the last line, however, be sure to verify that **Yes** in the **OUTGOING ALLOWED** field.
7. To save the information and exit the screen, **press <F10>.** The System Information menu displays.

6.5.1.4 Setting Up the Business Hours Screen

1. From the System Information menu, select **BUSINESS HOURS**. The Business Hours setup screen displays.
2. For each day of the week, enter the **office opening time** in the **DAY SERVICE BEGINS** field and the **office closing time** in the **DAY SERVICE ENDS** field. The default is an office open time of 8:00 AM and office closing time of 17:00 (5:00 PM). If you want calls to be handled in the same way day and night, enter **00:00** in the **DAY SERVICE BEGINS** field, and **24:00** in the **DAY SERVICE ENDS** field. Refer to the Business Hours Worksheet completed by the system supervisor for specific information.
3. To save the information and exit the screen, **press <F10>.** The System Information menu displays.

6.5.1.5 Setting Up the Call Transfer Screen

1. From the System Information menu, select **CALL TRANSFER**. The Call Transfer setup screen displays.
2. The fields in the top half of the screen list the sequences that the Voice Mail is to dial to transfer calls (the "!" signifies *hook-flash* and the comma signifies *pause for one second*). Typically, these settings are appropriate for most telephone systems without any modification. If you *know* the actual sequences required by the telephone system, and they are different from those shown, make the changes as necessary.
3. To save the information and exit the screen, **press <F10>**. The System Information menu displays.

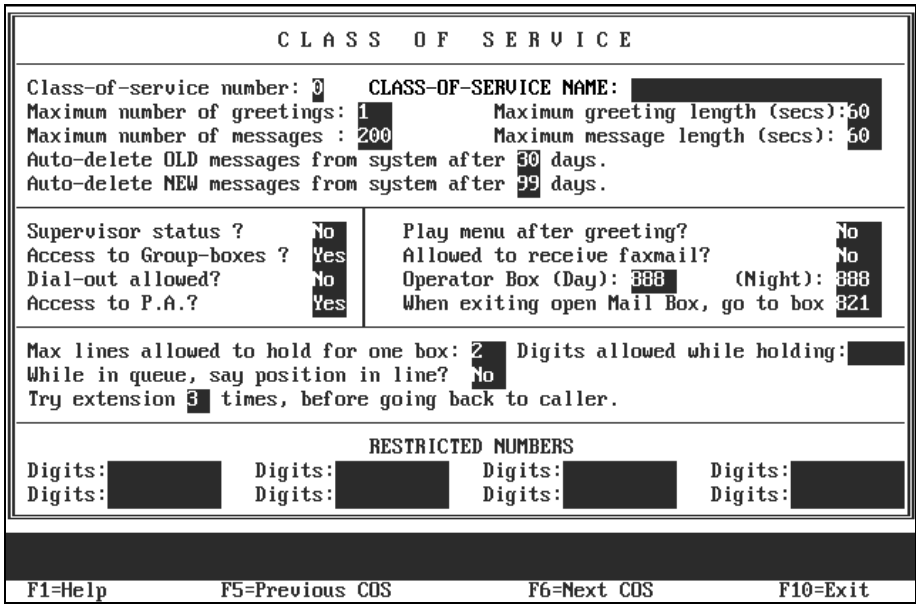
6.5.1.6 Setting Up the Class of Service Screen

Each mailbox on the system is assigned a class of service. The class of service assigned to the box dictates which Voice Mail features the mailbox owner has access to and how he/she can use those features.

There are 8 classes of services (0 through 7) that can be set up then applied to mailboxes on the Voice Mail. Two of them are pre-configured on the system. Class of service 0 is assigned by default to the prototype mailbox 9994, which serves as a template for every mailbox that you create on the system. Class of service 7 is assigned supervisor mailbox privileges. This class of service is assigned to mailbox 70, which is also pre-configured on the system. Mailbox 70, therefore, serves as the supervisor mailbox. By calling into the system and accessing the supervisor mailbox, the system supervisor can make necessary day-to-day modifications to the voice processing system, such as adding mailboxes, changing Routing box greetings, etc. See **section 3** for details.

1. From the System Information menu, select **CLASS OF SERVICE.** The Class of Service setup screen displays.
2. Use the information provided below to review and, if necessary, adjust the fields on two different Class of Service screens. First, review class of service 0, which functions as the class of service that will be assigned to subscriber mailboxes on the system. When you reviewed the screen for class of service 0, **press <F6>** to progress through the classes of service and go to the setup screen for class of service 7.

Review and, if necessary, adjust class of service 7. Ensure that in class of service 7 the **SUPERVISOR STATUS?** field is set to **Yes**. This allows the owner of the mailbox assigned this class of service to access the Supervisor menu over the telephone. Using this menu, the system supervisor can call into the system to perform day-to-day maintenance on the system.


CLASS OF SERVICE
Class-of-service number: 0 CLASS-OF-SERVICE NAME:
Maximum number of greetings: 1 Maximum greeting length (secs):60
Maximum number of messages : 200 Maximum message length (secs): 60
Auto-delete OLD messages from system after 30 days.
Auto-delete NEW messages from system after 99 days.
Supervisor status ? No
Access to Group-boxes ? Yes
Dial-out allowed? No
Access to P.A.? Yes
Play menu after greeting? No
Allowed to receive faxmail? No
Operator Box (Day): 888 (Night): 888
When exiting open Mail Box, go to box 821
Max lines allowed to hold for one box: 2 Digits allowed while holding:
While in queue, say position in line? No
Try extension 3 times, before going back to caller.
RESTRICTED NUMBERS
Digits: Digits: Digits: Digits:
Digits: Digits: Digits: Digits:
F1=Help F5=Previous COS F6=Next COS F10=Exit

CLASS OF SERVICE NUMBER

This field indicates the number of the class of service you are currently working with. To move to the next class of service number, press <F6>. Once you assign a class of service to a mailbox, the mailbox inherits all the privileges and restrictions defined in the class of service.

CLASS OF SERVICE NAME

Use this field to give the class of service a meaningful name. This helps remind you of the purpose for the class of service. Sample names include *Supervisors, Subscribers,* etc.

MAXIMUM NUMBER OF GREETINGS

A mailbox can have up to 10 pre-recorded personal greetings. The mailbox owner may record these greetings, store them in the mailbox, then choose the greeting that is to be active at any specific time. You may want to offer use of all 10 greetings to users or restrict them to fewer greetings. Use this field to define how many personal greetings users with this class of service should be allowed to record. If you set the field to 0, then callers who route to a mailbox belonging to this class of service always hear the pre-recorded system prompt, *"That extension is not available..."* The default setting is **10**.

Note that in class of service 7, this field must be set to allow at least 2 greetings. Class of service 7 is assigned to mailbox 70, the supervisor mailbox that controls the Routing boxes on the system. Because you will be setting up these Routing boxes with at least 2 greetings, this parameter must be set to at least **2** in the supervisor mailbox class of service.

MAXIMUM GREETING LENGTH

When a mailbox owner calls in to re-record his/her personal greeting, the Voice Mail limits the length of the new greeting to the value entered in this field. The default setting is **60**.

MAXIMUM NUMBER OF MESSAGES

The Voice Mail can hold up to 200 messages per mailbox. However, you may want to restrict some mailboxes to a lower limit (to conserve disk space). Use this field to define the maximum number of messages that can be stored in mailboxes assigned this class of service. Once the limit is reached for a particular mailbox, callers attempting to leave more messages in the mailbox are told that the box is full. The default setting is **200**.

MAXIMUM MESSAGE LENGTH

The value in this field defines the maximum length of a message (in seconds) that a caller can leave for mailboxes belonging to this class of service. The default setting is **60**.

AUTOMATICALLY DELETE OLD MESSAGES FROM SYSTEM AFTER X DAYS

The Voice Mail deletes messages saved as Old from mailboxes belonging to this class of service after the number of days you specify. An old message is one the mailbox owner has listened to, but has not yet deleted. If you enter **0** in this field, an old message is deleted at midnight on the day the message became old. If you enter **1** in this field, an old message is deleted at midnight on the day following the day the message became old.

To disable deletion of Old messages, enter **99** in this field. However, do this with caution, since accumulating messages may create disk storage problems. The default setting is **30**.

AUTOMATICALLY DELETE NEW MESSAGES AFTER X DAYS

Note:	Use this parameter with caution. Improper use may cause important messages to be lost.

The Voice Mail deletes new messages from mailboxes belonging to this class of service after the number of days you specify. A new message is one the mailbox owner has not yet listened to. If you enter **0** in this field, a new message is deleted at midnight on the day the message was received. If you enter **1** in this field, a new message is deleted at midnight on the day following the day the message was received.

To disable the deletion of new messages, retain the default setting of **99** in this field. This is the default operating mode. If you enter a number other than 99 in this field, remember that messages are deleted whether or not the mailbox owner has listened to them.

SUPERVISOR STATUS

This field defines whether mailboxes belonging to this class of service should have supervisor privileges. A supervisor can perform certain actions not available to regular mailbox owners. For example, a supervisor can add a mailbox or delete a mailbox by calling in from any telephone. Additional information on supervisor functions is provided in **section 3**. The default setting in class of service 0 is **No**, in class of service 7 is **Yes**.

ACCESS TO GROUP BOXES

By setting this field to **Yes**, you allow subscribers assigned this class of service to access any Group boxes set up on the system. (The default setting is **Yes**.)

DIAL-OUT ALLOWED

This field indicates whether the owner of a mailbox belonging to this class of service is allowed to place outgoing calls from the mailbox. The default setting is **No**.

ACCESS TO P.A.

When a caller is listening to a mailbox owner's greeting, one of the features the Voice Mail offers is the option to have the call announced over the P.A. system. Use this field to allow or deny access to the P.A. feature for callers to mailboxes belonging to this class of service. The default setting is Yes.

Play Menu After Greeting

If an extension is busy or does not answer, the Voice Mail plays the mailbox owner's personal greeting. After playing the greeting, it can announce the options available to the caller (for example, *"If you would like to leave a message, press 1. To try another extension, press 3, or to speak with an operator, press 0."*). If the mailbox owners do not record these options as part of their greetings, set this field to **Yes** so that the Voice Mail plays the menu. If you want to allow each mailbox owner to decide which options to offer, set this field to **No** and instruct each mailbox owner to include the options in his/her personal greeting. The default setting is **No**.

ALLOWED TO RECEIVE FAXMAIL

Voice Mail users should retain the default setting **No** in this field.

OPERATOR BOX (DAY) (NIGHT)

When a caller is listening to a mailbox greeting, one of the options is to dial zero to reach an operator. Use these fields to indicate the mailbox to which the call should be routed if the caller indicates that he/she wishes to speak with an operator. The default setting is **888**.

WHEN EXITING OPEN MAILBOX, GO TO BOX

When a mailbox owner has logged in to his/her box, has concluded listening to messages, changing options, etc., and has selected to exit from the Main menu, this field tells the Voice Mail where to send the call. Voice Mail users should retain the default setting in this field as **821**.

MAX LINES ALLOWED TO HOLD FOR ONE BOX

You can limit the number of lines that can simultaneously hold for a mailbox belonging to this class of service. For example, if you set this number to 3, and lines 1, 3, and 6 are holding for a mailbox, then subsequent callers are not offered the option to hold. Instead, they hear the personal greeting recorded for the box, so they can leave a message, try another extension, etc. The default setting is **2**.

> **Note**: If you want to disable the Call Queuing feature for the class of service, set this field to **0**.

DIGITS ALLOWED WHILE HOLDING

While a caller is in the queue holding for an extension, he/she can press a digit to leave the queue and process the call differently. By default, the options open to the caller are the same as those available when the caller hears the personal greeting (*"If you would like to leave a message, press 1. To try another extension, press 3, or to speak with an operator, press 0."*). If you want to restrict the caller to fewer choices while in the queue, use this field to specify which digits are allowed. All other digits are ignored by the Voice Mail while the caller is in the queue. For example, if you enter 13 in this field, the only options available to the caller are:

1 To Leave a message

3 To Try another extension

While a caller is in the queue, holding for an extension, the Voice Mail can keep him/her informed on the progress of the call. If you set this field to **Yes**, the Voice Mail announces to the caller:

"That extension is still busy. You are number [x] in line. If you would prefer to leave a message, press 1, or to speak with an operator, press 0."

If you select **No** in this field, the Voice Mail replies:

"*That extension is still busy. If you would prefer to leave a message, press 1, or to speak with an operator, press 0."*

The default setting is **No**.

TRY EXTENSION X TIMES, BEFORE GOING BACK TO CALLER

This parameter applies only if the **MAX LINES ALLOWED TO HOLD** field is greater than 0. If the caller chooses to hold, the Voice Mail plays a series of hold prompts to the caller (these are typically music or commercials). At the end of each hold prompt, the Voice Mail tries the extension again. If it is busy, then the next hold prompt is played to the caller.

After the defined number of hold prompts have been played, the Voice Mail goes back to the caller and offers the options to remain on hold, try another extension etc. This field allows you to specify the number of hold prompts that should be played before the Voice Mail offers these options to the caller.

As shipped, the Voice Mail has only one hold prompt recorded (system prompt #146). Therefore, if you enter 3 in this field, a caller queued to a busy station hears this same prompt three times before being offered the options again. If you record the second hold prompt (#147), then the caller hears prompt # 146, #147, then #146 again before being offered the options. You may record up to 100 different hold prompts, which are played in sequence. (Remember: At the end of *each* hold prompt, the Voice Mail tries the extension again). After the Voice Mail plays the highest number hold prompt recorded, it returns to the lowest number after the next try. The default setting is **3**.

Note:	The time between tries to a busy extension is determined by the length of each hold prompt recorded. The prompt supplied with the Voice Mail (#146) is approximately 30 seconds.

RESTRICTED NUMBERS

When a mailbox owner calls in to change his/her call-transfer number, pager number, or message notification number, you may want to prevent him/her from changing it to certain numbers, such as long-distance numbers.

These fields allow you to define digit sequences that are to be blocked. The Voice Mail looks at each of these Digits fields to determine if any of them match the number entered by the mailbox owner. If the number entered by the caller begins with the digits specified in the Digits field, the Voice Mail defines the number entered as a match.

For example, if you enter the digits 1900 in one of the Digits fields, the Voice Mail considers 1-900-555-1212, 1-900-123-4567, 1-900-111-2222 to be matches. Telephone number 1-901-555-1212 would not be considered a match.

If you enter the digit 0 in one of the digits fields, the Voice Mail considers all numbers beginning with 0 to be matches. This would include calls to the operator (0), calls to the long-distance operator (00), international calls (011), and any operator-assisted call (0 followed by telephone number).

If the caller enters a number that matches one of the digit strings you enter here, the Voice Mail informs the mailbox owner that the number is not acceptable and retains the current set up.

Once you review and adjust all fields on both Class of Service setup screen 0 and Class of Service setup screen 7, **press <F10>** to save the information and exit. The System Information menu displays.

You have now reviewed the necessary entries on the System Information screens. To return to the Line Information screen, **press <F10>**.

6.5.2 SPECIFYING BOX INFORMATION

6.5.2.1 What Is a Box?

When the Voice Mail answers a call, it processes it by sending it to a *box*. Each box performs a specific function (for example, playing a menu to the caller and waiting for a response). It then passes the call to another box, which in turn performs its specific function, etc.

Depending on the configuration purchased, the Voice Mail provides 100 Boxes. Routing boxes are used to answer incoming calls, play a listing of option to callers, and route the call to a specific mailbox based on the digits dialed by the caller. The mailboxes transfer calls to their associated extensions and store messages for system subscribers, and they can be set up to forward calls to another phone or extension number, deliver messages to another phone or pager, play one of 9 pre-recorded greetings to callers, screen calls, queue calls when the extension is busy, or record call conversations.

6.5.2.2 Understanding Routing Box 800, 801, and 821

According to the entries specified on the Line Information screen, the Voice Mail will route all incoming calls to Routing box 800. This box answers calls during the day and lunch service hours and plays a greeting to callers. After day/lunch service hours, the system routes calls to Routing box 801. Typically, companies offer more extensive call routing options to callers during day/lunch service hours than during closed hours. Often, for example, single-digit call routing (*"...Press 2 for Sales..."*) is not offered during closed hours. Therefore, the greeting voiced by and options available in Routing box 801 are often different than those in Routing box 800.

So that the system supervisor can alter the system to voice a generic holiday greeting on holidays the office is closed, you will set up both Routing box 800 and 801 to include a holiday greeting alternative. Therefore, procedures in this document guide you through recording two greetings in both boxes 800 and 801: an office open greeting and a holiday greeting in box 800, and an office closed greeting and a holiday greeting in box 801. (Keep in mind that holidays last 24 hours, therefore calls received on a holiday may be processed by either box 800 or 801, depending on when the call is received. For this reason, a holiday greeting must be recorded in both box 800 and 801). Sample greetings for these boxes are provided in **section 3.2.**

Routing Box 821 is designed by default to take over and route calls once they have passed through Routing box 800 or 801. A call may go to Routing box 821, for example, after the caller leaves a voice message in a subscriber's mailbox. Routing box 821 offers callers a menu similar to Routing box 800, but box 821 is pre-configured so if a caller does not enter an extension or select a menu option, the call is disconnected. In Routing box 800 and 801, callers who do not enter an extension or select an option are transferred to the operator. This is a safety measure designed to assist callers who use rotary phones or are too slow to respond to system prompts. By disconnecting non-responsive callers in box 821, the system simply assumes that the caller knew how to select menu options in box 800 or 801, and therefore, since no option was selected in box 821, the caller hung up.

Because we recommend you record two greetings in both Routing box 800 and 801, you will not use the **GREETING RECORDED** field on the Routing Box setup screens. This field allows you to record only one greeting for the Routing box. Instead you will record all necessary greetings by following the steps in the **section 2.4.5.9**, which you will complete after you review and set up the Routing boxes and mailboxes.

6.5.2.3 Accessing Box Information Screens

1. From the Line Status screen, **press <F10>**. The Main menu displays and you are prompted to enter a system password.
2. At the prompt to enter the **system password**, press <Enter>.
3. From the Main Menu, select **BOX INFORMATION**. The Box Information menu displays.

You should review the setup for the following boxes:

- Routing Box 800
- Routing Box 801
- Routing Box 821
- Prototype Mailbox 9994
- Supervisor mailbox 70

After you review and, if necessary, adjust prototype mailbox 9994, you use it to set up subscriber mailboxes. You then make necessary adjustments to these mailboxes to customize them for system subscribers. This section details the steps you must follow to set up all necessary boxes and make the required adjustments.

The following procedures identify screen setup entries necessary for the Voice Mail to effectively process calls. Fields that are not specifically discussed contain default values that should be appropriate in nearly all setup situations.

6.5.2.4 Setting Up Single Digit Call Routing

1. From the Box Information menu, select **ROUTING BOX**. The Routing Box setup screen displays.

```
                    R O U T I N G   B O X

Box number : 800      BOX NAME :Main Greeting

Greeting recorded : No            Owner: 70

Number of times to play the greeting :   1
Number of seconds to wait for a digit:   1

If no digits dialed, Go to box ... - box 821
If invalid digit dialed, go to box 800
Route the call based on :Digit dialed
When digit received, wait for more digits? Yes

Destination for digit 1 :          6 :          * : 9998
                      2 :          7 :          # : 9992
                      3 :          8 :
                      4 :          9 :      Voice:
                      5 :          0 : 888
```

2. **Press <F4>** to access the box selection screen. A small window displays prompting you for the box number. Type `800` then press <Enter>.

3. Press <Enter> to move the cursor moves to the **OWNER** field. So that more than one greeting can be recorded and stored for use with this Routing box, this box should be identified as being owned by the supervisor mailbox, mailbox 70. By specifying a mailbox owner for this Routing box, the box takes on certain "mailbox" attributes, which include being allowed to house the same number of greetings as the mailbox owner's mailbox. (You specified this number when you set up class of service 7.)
4. Press <Enter> to move the cursor to the **DESTINATION FOR DIGIT** fields. If you are setting up the system to provide single-digit call routing options to callers, complete these fields. Refer to the Routing Worksheet completed by the system supervisor for specific information on entries for these fields. Do not modify the **DESTINATION FOR DIGIT *** and # fields.
5. Repeat steps 2 through 5 to set up Routing box 821. In step 2, type **821** (instead of 800) to access box 821. In the **DESTINATION FOR DIGITS** field, we recommend you make the same entries as you did on the setup screen for box 800.
6. Repeat steps 2 through 5 to set up Routing box 801. In step 2, type **801** (instead of 800) to access box 801. In the **DESTINATION FOR DIGITS** field, you may decide to modify or simply not include the single-digit dialing options, since this box will control how calls are routed when the office is closed. If you choose to use the same single-digit dialing options, simply re-enter them here.
7. To save all setup entries and exit the Routing Box setup screen, **press <F10>**. The Box Information menu displays.

6.5.2.5 Setting Up Prototype Mailbox 9994

You need to create a mailbox for each subscriber who will use the system to record messages. Since most of the setup information will be the same for every mailbox you need, you should review the system's prototype mailbox, which is used as the mailbox setup model. The prototype mailbox is box number 9994. Every time you select to create a new mailbox, the system does so by making a copy of mailbox 9994.

1. From the Box Information menu, select **MAIL BOX**. The Mail Box setup screen displays with the Page Number menu.
2. **Press <F4>** to access the box selection screen. A small window displays prompting you for the box number. Type **9994** then press <Enter>.
3. Press <Enter> to move the cursor to the **TRANSFER TYPE** field. When a call is routed to the mailbox, the first action taken is to transfer the call to the number specified in the **TO:** field. The Voice Mail offers several options as to how the call can be transferred. When you move the cursor to this field, the various options are presented in a menu.

All transfer type options are described below. Use this information to select a transfer type. Note that in almost all system setups, you should select the **Blind** transfer type so the system can function most efficiently. The default setting is Blind.

NO TRANSFER

The Voice Mail does not transfer the call. Instead, it plays the mailbox owner's personal greeting (if one has been recorded) or a system default greeting. The caller then has several available options before recording a message.

BLIND

The Voice Mail transfers the call by dialing the number, then dropping out of the call. It transfers the call without monitoring to check whether the called party is busy, answers, etc. The final outcome of the call is the total responsibility of telephone system. If the DX-80 has been programmed for transfer-recall capabilities, then when the telephone system transfer-recall timer expires, the call is returned to the Voice Mail. (The Voice Mail cannot perform call queuing when using Blind call transfers.)

WAIT FOR ANSWER

The VP system dials the number and monitors the line. If the called party is busy, the VP system offers the caller the options to hold, leave a message, call another extension, etc. If the called party is not busy, the VP system monitors the line, waiting for the called party to answer. If the called party does not answer within a specified number of rings, the VP system abandons the transfer and plays the personal greeting, takes a message, etc. If the called party does answer, the system announces the call with the prompt, "*I have a call for you, [mailbox owner's name*]," and completes the transfer. The VP system can perform call queuing when the mailbox is set up to perform Wait For Answer transfers.

WAIT FOR RING

This is a combination of the Wait For Answer and Blind transfer types. If the called party is busy, the calling party is offered the same options as with the Wait For Answer transfer type. If ringing is detected on the line, the Voice Mail executes a Blind transfer and drops out of the call. (The Voice Mail *can* perform call queuing if the extension is busy.)

SCREEN

This transfer type functions exactly the same way as with the Wait For Answer transfer type until the called party answers. Once the called party answers, the Voice Mail plays a system prompt offering the called party several options:

- Press 1 to accept the call. The parties are connected.
- Press 2 to have the Voice Mail voice the mailbox owner's currently active greeting to the called party.
- Press 3 to send the calling party to the destination selected in the **IF CALLER CHOOSES OTHER OPTIONS** field on Page 2 of the mailbox's Mailbox setup screens.
- Press 4 plus a greeting number (0 through 9) to play the selected greeting to the caller, provided that the greeting has been recorded.
- Press 5 plus any valid box number to send the calling party to that box, where the call is treated as would any other call to that box.
- Press 6 to accept the call. The parties are connected, but the Voice Mail remains connected to the call and records the conversation. The recording is stored as a message in the called party's mailbox (provided the host telephone system allows conferencing on voice mail ports).

(With the Screen transfer type option, the Voice Mail can perform call queuing if the extension is busy.)

6.5.2.6 Creating Subscriber Mailboxes

Once you set up Prototype mailbox 9994, you can now efficiently set up all the mailboxes that will be used by subscribers on the system.

1. From the Box Information menu, select **MAIL BOX**. The Mail Box setup screen displays.
2. To add a new mailbox, **press <F2>.**
3. A small window displays prompting you for the box number. Enter the **number of the first mailbox** you want to create, then press <Enter>.

> **Note:** Enter as the mailbox number the same number as the extension to which the mailbox will transfer calls. Also, note that the default password for each mailbox is the same as the box number.

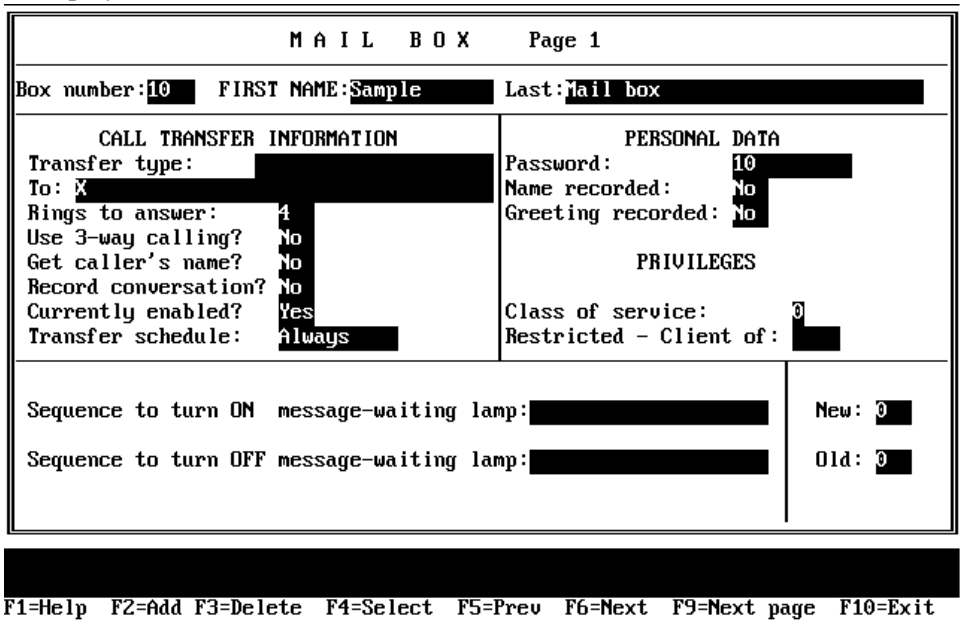
4. The Voice Mail creates the new mailbox by making a copy of the Prototype mailbox. The new mailbox is displayed on the screen.
5. Repeat steps 3 through 5 for each subscriber mailbox you want to create.
6. Once you create all necessary mailboxes, continue with the next procedure, below.

6.5.2.7 Customizing Subscriber Mailboxes

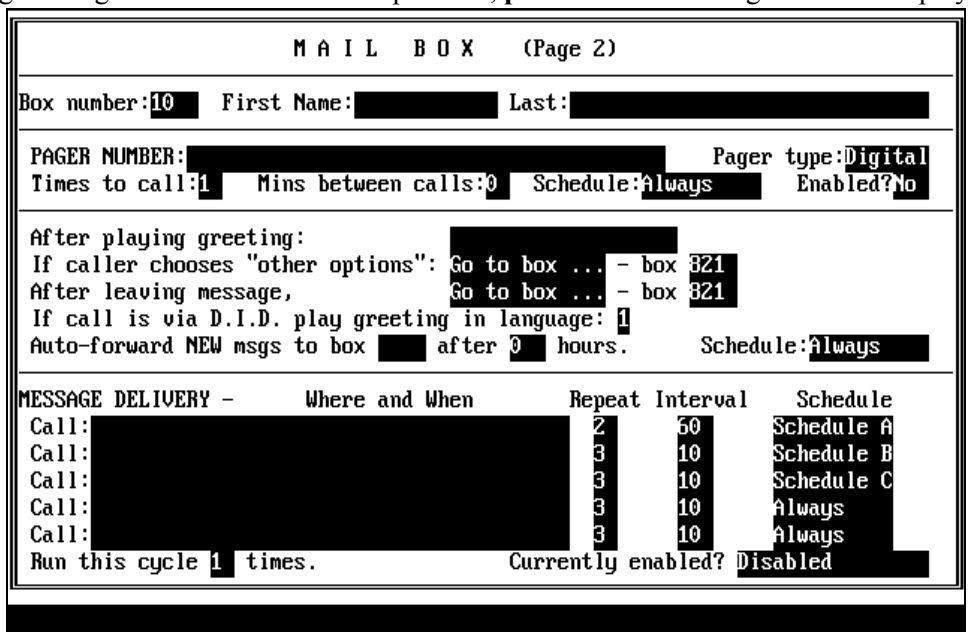
Using information the system supervisor provides on the Mailbox Setup Worksheets, you can now customize the mailboxes you created for each subscriber on the system.

The procedure below identifies the fields you should be sure to customize for each mailbox. Fields that are not specifically discussed contain default values that should be appropriate in nearly all setup situations. Therefore, it is unlikely that you need to modify these fields.

1. To access the mailbox you want to customize, **press <F4>**. A small window displays prompting you for the box number. Type **the box number** then press <Enter>. The Mail Box Page 1 setup screen displays.



2. Press <Enter> to move the cursor to the **FIRST NAME** field. Enter the mailbox owner's first name. Press <Enter> to move the cursor to the **LAST** field. Enter the mailbox owner's last name.
3. To go to Page 2 of the Mail Box setup screen, **press <F9>**. The Page 2 screen displays.


M A I L B O X (Page 2)
Box number:10 First Name: Last:
PAGER NUMBER: Pager type:Digital
Times to call:1 Mins between calls:0 Schedule:Always Enabled?No
After playing greeting:
If caller chooses "other options": Go to box ... - box 821
After leaving message, Go to box ... - box 821
If call is via D.I.D. play greeting in language: 1
Auto-forward NEW msgs to box after 0 hours. Schedule:Always
MESSAGE DELIVERY - Where and When Repeat Interval Schedule
Call: 2 60 Schedule A
Call: 3 10 Schedule B
Call: 3 10 Schedule C
Call: 3 10 Always
Call: 3 10 Always
Run this cycle 1 times. Currently enabled? Disabled

4. Press <Enter> to move the cursor to the **PAGER NUMBER** field. If the subscriber is to use the Paging feature, use the following information to complete this section of the Mail Box setup screen.

PAGER NUMBER

Enter the telephone number of the paging service. The mailbox owner may change the number remotely. Normally, access codes for outside lines are not required here. Instead, that information should be entered on the System Information / General setup screen.

To restrict pager calls to use lines in a particular line group, enter the letter (A, B, C, or D) of the line group in braces { } before the telephone number (for example, {A}5551212).

Tone or Voice pagers may be used with the Message Delivery feature discussed later in this section.

The pager number you enter can contain the digits 0 through 9, star (*), pound (#), and the following special characters:

Character	Use
P	Use pulse (also known as 'rotary') dialing.
T	Use tone dialing (the default).
,	Short pause (duration can be changed in Technical Information screen. Default is one second).
%	Medium pause (equal in length to 4 commas).
L	Long pause (equal in length to 8 commas).
!	Hookflash.
N	No progress tones (must be last character). The Voice Mail ignores all call progress tones during the course of the call. When it has finished dialing, the system immediately assumes that the pager system has answered.
[ ]	Enclosing the number in brackets prevents the mailbox owner from being able to call in and change the number.
{}	Specifies a line group is to be used (for example, {A}555-1212 indicates "choose any line in line group A, and dial the number 555-1212").
any other character	Can be used for punctuation and is ignored.

PAGER TYPE

The Voice Mail supports both Tone and Digital pagers in this section of the mailbox programming. Specify here which type of pager the mailbox owner has (Digital, Tone or None).

When a caller asks the Voice Mail to page a mailbox owner, the Voice Mail looks for a free line on which to call the paging service. If no lines are free to make the call, the Voice Mail queues the request and re-tries every 10 seconds for approximately 10 minutes.

NUMBER OF TIMES TO CALL

The Voice Mail calls the pager the number of times you specify in this field. Repetitive paging may be useful if the pager is turned off periodically or is out of pager range.

> **Note**: This field is used to tell the Voice Mail how many successful calls it should make to the paging service. Do not confuse this with the pager-retry feature. If the Voice Mail calls the pager number and does not hear it ring and answer, then it automatically re-tries the call at 10-second intervals, for a pre-defined number of times.

MINUTES BETWEEN CALLS

If you enter a number greater than 1 in the **TIMES TO CALL** field, this field instructs the Voice Mail how long it should wait between re-calls.

> **Note**: This field tells the Voice Mail how long to wait between successful calls to the paging service. Do not confuse this with the pager-retry feature.

CALL SCHEDULE

The Pager notification feature follows a time schedule. The options are:

Schedule	Result
ALWAYS	Pager notification is available at all times.
DAY SERVICE	Pager notification is available only during day/lunch service, as defined in the System Information / Business Hours screen.
NIGHT SERVICE	Pager notification is available only during non-day/lunch service, as defined in the System Information / Business Hours screen.
SCHEDULE A, B, C, or D	Pager notification is available only during the schedule defined on Page 3 of the Mail Box setup screen for this mailbox.

ENABLED

Set this field to **Yes** to indicate that the pager feature for this mailbox is currently on. Set the field to **No** to indicate that the pager feature is off. The mailbox owner can also toggle this field on and off by calling into the system. If this field is set to **No**, it overrides the call schedule set in the previous field.

5. Press <Enter> to move the cursor to the first **MESSAGE DELIVERY** field. If the subscriber is to use the Message Delivery feature, use the following information to complete this section of the Mail Box setup screen.

CALL

Enter the telephone number the Voice Mail should call to inform the mailbox owner that there are new messages in his/her mailbox.

The number can contain the DTMF digits 0 - 9, * and #, plus any of the following special characters:

Character	Use
P	Use pulse (also known as ‘rotary’) dialing.
T	Use tone dialing (the default).
,	Short pause (duration can be changed in Technical Information screen. Default is 1 second).
%	Medium pause (equal in length to 4 commas).
L	Long pause (equal in length to 8 commas).
!	Hookflash.
[ ]	Enclosing the number in brackets prevents the mailbox owner from being able to call in and change the number.
{}	Specifies a line group is to be used (for example, {A}555-1212 indicates “choose any line in line group A, and dial the number 555-1212”).
H	Hang up immediately after dialing the number (must be last character).
M	Answering machine. This must be the last character in the telephone number. It tells the Voice Mail that the number being called has an answering machine attached. When the Voice Mail calls the number, it announces that there are messages, as usual. If the Voice Mail has not received a DTMF digit (1 for Yes, anything else for No), by the end of the announcement cycle(s), it assumes that it is talking to an answering machine, and proceeds to play each new message in turn.
V	Voice pager. This must be the last character in the telephone number. Details of voice pager programming are found later in this section.
I	Internal (must be the first character). Overrides the INTERNAL parameter (in the configuration file VM.CFG) and treats this number as an internal call regardless of the number of digits. The Voice Mail does not dial the sequence specified in the General Information / Digits To Get A Line On External Call field.
E	External (must be the first character). Overrides the INTERNAL parameter (in the configuration file VM.CFG) and treats this number as an external call regardless of the number of digits. The Voice Mail dials the sequence specified in the General Information / Digits To Get A Line On External Call field.
N	No progress tones (must be the last character). The Voice Mail ignores all call progress tones during the course of the call.
any other character	Can be used for punctuation and is ignored.

The owner of a mailbox can call in and remotely change the first Message Notification number, but cannot use or modify special characters.

REPEAT

Enter the number of successful calls to each telephone number. A successful call is generally defined as one where the Voice Mail has seized an available line port, dialed the number, and detected an answer. If the call is not successful (for example, the called number was busy) the Voice Mail automatically re-tries every few seconds up to twenty times.

INTERVAL

If the Repeat field contains a number greater than 1 or there are additional Call number sequences, enter the interval (in minutes) between calls to this number and/or the interval before proceeding to the next Call number sequence.

SCHEDULE

Select when the Voice Mail should call this number. The options are:

Schedule	Result
ALWAYS	The number is called any time a new message is left in the mailbox.
DAY SERVICE	The number is called only during day/lunch service, as defined in the System Information / Business Hours screen.
NIGHT SERVICE	The number is called only during non-day/lunch service, as defined in the System Information / Business Hours screen.
SCHEDULE A, B, C, or D	The number is called only during the schedule defined on Page 3 of the Mail Box setup screen for this mailbox.

RUN THIS SEQUENCE N TIMES

Once the Voice Mail has called every number listed, it considers that it has run the sequence one time. It will then check the value in this field. If this field is set to a number higher than 1, the Voice Mail starts again and repeats the sequence the specified number of times.

CURRENTLY ENABLED?

This field identifies which messages the Voice Mail is to deliver:

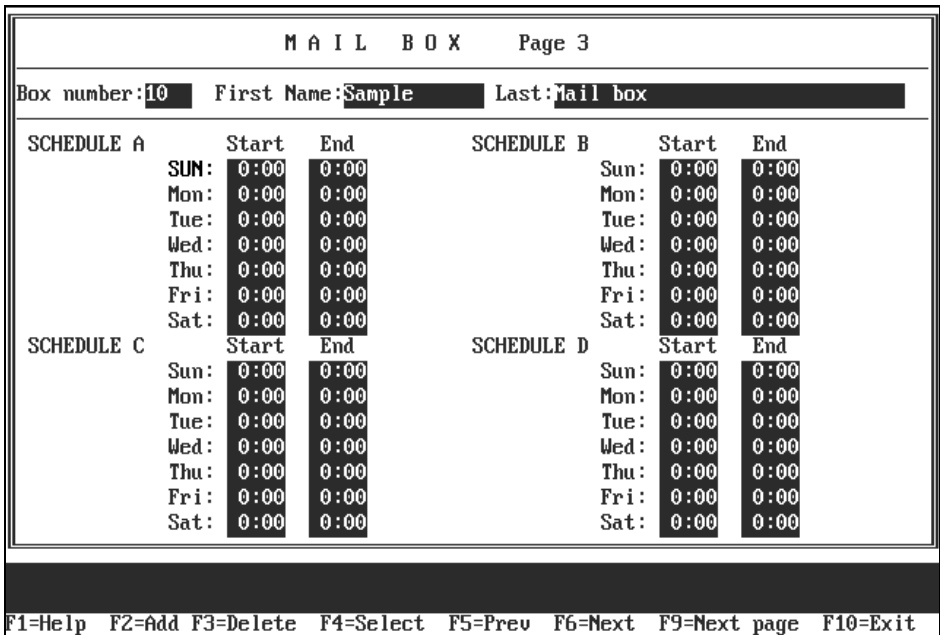
Options Menu

DISABLED	The Voice Mail does not deliver messages.
URGENT MSGS ONLY	The Voice Mail delivers only messages marked urgent, but does not call to deliver non-urgent messages.
ALL MESSAGES	The Voice Mail calls every time a message is deposited into the mailbox.

Setting this field to **DISABLED** overrides the **SCHEDULE** field.

The owner of a mailbox can call in remotely and turn his/her Message Delivery feature on or off, or change the first number to be called. The other telephone numbers, if in use, cannot be changed remotely.

6. To go to Page 3 of the Mail Box setup screen, **press <F9>**. The Page 3 screen displays.



7. Press <Enter> to move the cursor to the first **SCHEDULE A** field. If the subscriber is to use the Pager or Message Delivery feature according to a particular schedule, use the following information to complete the Mail Box Page 3 setup screen.

START

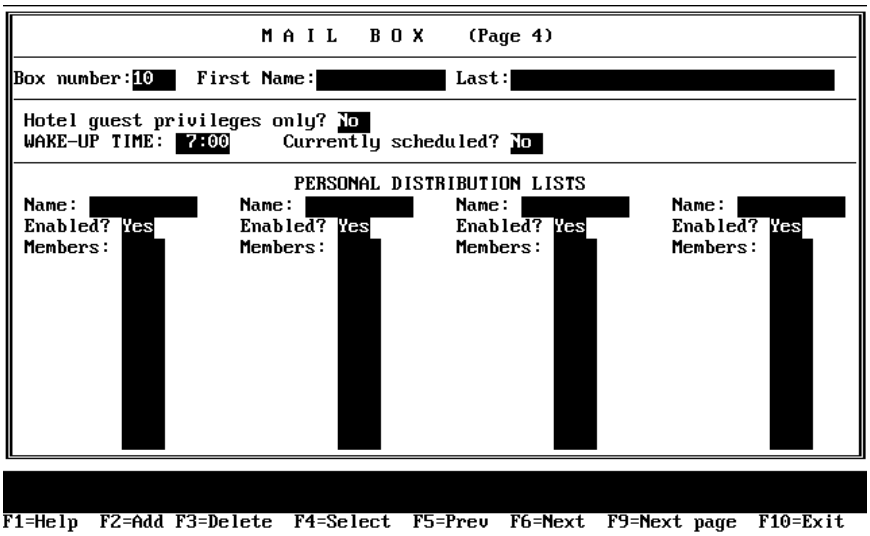
Enter the time at which this schedule should begin on this day. The time should be entered in 24-hour format (for example, enter 20:00 for 8:00 PM).

END

Enter the time at which this schedule should end on this day. The time should be entered in 24-hour format (for example, enter 20:00 for 8:00 PM).

> **Note**: If you want the schedule to be active all day, enter 00:00 as the **START** time and 24:00 as the **END** time.

8. To go to Page 4 of the Mail Box setup screen, **press <F9>**. The Page 4 screen displays.


M A I L B O X (Page 4)
Box number: 10 First Name: Last:
Hotel guest privileges only? No
WAKE-UP TIME: 7:00 Currently scheduled? No
PERSONAL DISTRIBUTION LISTS
Name: Name: Name: Name:
Enabled? Yes Enabled? Yes Enabled? Yes Enabled? Yes
Members: Members: Members: Members:
F1=Help F2=Add F3=Delete F4=Select F5=Prev F6=Next F9=Next page F10=Exit

9. Confirm that the **ENABLED** field is set to **Yes** for all four personal distribution lists. This allows subscribers to create up to 4 personal distribution lists in their mailboxes, which they can then use when sending messages to groups of subscribers.
10. Repeat steps 1 through 9 to customize each mailbox you created for each subscriber on the system. Once you customize all subscriber mailboxes, continue with the next procedure.

6.5.2.8 Customizing the System Supervisor Mailbox

1. To access the system supervisor mailbox, **press <F4>**. A small window displays prompting you for the box number. Type **70** then press <Enter>.
2. Press <Enter> to move the cursor to the **FIRST NAME** field. Type **SUPERVISOR** in this field. Press <Enter> to move the cursor to the **LAST** field. Enter the **system supervisor's last name**. Note that though you may type any name or words in these fields, using these entries identifies this mailbox as the supervisor mailbox and identifies the individual who is currently acting as the on-site system supervisor.
3. Press <Enter> to move the cursor to the **CLASS OF SERVICE** field. Verify that **7** is entered in this field. This entry assigns class of service 7, which has supervisor privileges, to this mailbox.
4. To go to Page 2 of the Mail Box setup screen, **press <F9>**. The Page 2 screen displays.
5. To complete the supervisor mailbox setup, repeat steps 4 through 9 of the previous procedure.
6. To save all mailbox customizations and exit the Mail Box setup screen, **press <F10>**. The Box Information menu displays.

6.5.2.9 Recording Routing Box Greetings

As described in **section 2.4.5.2**, the following procedure guides you through recording two greetings in both Routing boxes 800 and 801: an office open greeting and a holiday greeting in box 800, and an office closed greeting and a holiday greeting in box 801. Sample greetings for these boxes and for box 821 are provided in **section 3.2.**

Note:	When you record Routing box greetings, you must include instructions that identify any single-digit call routing options available to the caller.

1. From a telephone, call into voice mail and log into **supervisor mailbox 70**. Note that the default password for the mailbox is the same as the mailbox number, 70.
2. The Voice Mail tutorial session starts. Complete the tutorial. When prompted to record the name and greeting, you may elect to identify this as the supervisor mailbox. When changing the password, be sure to inform the system supervisor of the number you select. When you complete the tutorial, press <*> to prevent it from voicing the next time the box is accessed.
3. The system responds with the Main menu:

"To listen to your messages press 1. To send a message press 2. To change your options press 3."

Press 3 to change options. The system responds with the Options menu:

Options Menu	
To Record Your Name	Press 1
To Record Your Greeting	Press 2
To Change Your Password	Press 3
To Change Your Call Transfer Feature	Press 4
To Change Your Message Notification Feature	Press 5
To Change Your Pager Feature	Press 6
To Review Msgs Scheduled for Future Delivery	Press 7
To Change Your Personal Distribution Lists	Press 8
To Retrieve a Message Previously Sent	Press *
To Return to the Main Menu	Press #

4. From the Options menu, **press 2**.
5. When prompted, **press 800** to indicate you want to work with Routing box 800.
6. When prompted, **press 1** to confirm the number you entered or press # if the number you entered was incorrect. Once you press 1 to confirm, the system responds with the following options:

To Replay the Greeting	Press 1
To Re-Record the Greeting	Press 2
To Delete the Greeting	Press 3
To Choose a New Greeting	Press 5
To Exit	Press #

7. To record the first greeting for the Routing box, **press 2**. The system prompts you to enter the number of the greeting you want to record. Enter **greeting number 0**. Then, follow the prompts to **record the office open greeting**.
8. To record the holiday greeting for Routing box 800, repeat step 7, select **greeting number 1**, and **record the holiday greeting**.
9. To record greeting(s) for Routing box 801, **press <#>** to exit the menu shown above and return to the Options menu. Then repeat steps 4 through 7 above. In step 5, **press 801** to indicate you want to work with Routing box 801. In step 7, **record the office closed greeting**, instead of the office open greeting.
10. To record the holiday greeting for Routing box 801, repeat step 7, select **greeting number 1**, and **record the holiday greeting**.
11. To record the greeting for Routing box 821, **press <#>** to exit the menu shown above and return to the Options menu. Then repeat steps 4 through 7 above. In step 5, **press 821** to indicate you want to work with Routing box 821. In step 7, **record the office open greeting** call routing options, **omitting the introductory remarks** *"Welcome to ..."*
12. When you have recorded all necessary greetings, **press <#>** to return to the Options menu, then press <#> to return to the Main menu.

Be sure to instruct the system supervisor to refer to **section 3.2** for detailed instructions on changing the active Routing box greetings and recording new greetings.

6.6 Test Procedures

After completing all required programming, several tests should be performed to ensure that the voice mail system is functioning properly.

6.6.1 CALLING INTO YOUR VOICE MAILBOX

1. While the telephone is idle press the VOICE MAIL feature button or press ***Intercom***. and dial the intercom number associated with the voice mail.
2. The display indicates the call status. When the voice mail connection is complete, you will hear the prompt for your password.
3. Use the voice mail user guide and audio prompts to retrieve messages and invoke other mailbox operations (send messages, update personal settings, etc.).
4. Hang-up to disconnect the call. (Your voice mailbox will be closed automatically by the DX-80 if programming has been completed properly.)

6.6.2 TRANSFERRING A CALL TO ANY USER'S VOICE MAILBOX

1. While connected to a call, press the **Voice Mail** button.
2. The display prompts you to enter the user's voice mailbox where this call should be routed. Input the user's voice mailbox (usually the same number as the extension) or press the DSS key associated with that station if it exists on your phone. Hang up the phone to complete the transfer.
3. The call is routed to the mailbox entered in a record mode so that the caller can leave a message for the mailbox user.

6.6.3 RETRIEVING MESSAGES FROM YOUR VOICE MAILBOX

1. When messages are waiting in your voice mailbox, the display will indicate that messages are waiting and advise you of the number of new messages.
2. Press the center LCD Interactive button. (Or press the **Voice Mail** button). A connection is established and you will hear the prompt for your password.
3. Use the voice mail user guide and audio prompts to retrieve messages and invoke other mailbox operations.
4. Hang-up to complete the call. (The DX-80 will close your voice mailbox.)

Conditions

(a) When transferring a call to voice mail, you may choose to enter no mailbox number. Doing so, will route the caller to the voice mail main greeting (e.g., Auto Attendant greeting).

(b) If no voice mail ports are available at the time you place your call into voice mail, you will hear ring-back tone until a port is available.

(c) When voice mail ports are used heavily (high call traffic), messages indications will update notably slower than usual.

(d) When VM messages are waiting, the Auxiliary Lamp will flash green.

APPENDIX A. SETTING UP THE SYSTEM WITH TELEPARAMETER

This section provides instructions on using the teleparameter feature to set up a new system at a customer site or to later make modifications to the system. Using the Teleparameter feature, you can change the parameter values that affect system wide setup information, box setups, and VM.CFG file data by simply calling into the system. You simply log into supervisor mailbox 70 over the telephone, select to modify system parameters, then, as prompted, enter codes that identify each parameter you want to change and the new value to which you want to set the parameter. The screen illustrations and parameter value table provided in this section indicate the parameters and their associated codes.

Technicians who have experience setting up Corporate Office or Small Office systems may prefer to use the Teleparameter feature to quickly make modifications and get the Voice Mail up and running at the customer's site. Be advised, however, that since this technique involves inputting codes that represent system parameters and corresponding values to which parameters are to be set, it is a bit more difficult to use effectively if you are unfamiliar with setting up Corporate Office or Small Office systems. For this reason, we recommend that technicians unfamiliar with Corporate Office, Small Office, or DX-80 Corporate Office DX Voice Mail attach a laptop to the Voice Mail and use the instructions provided in the previous sections to complete all necessary system setup steps

Note: If you choose to set up the system using the Teleparameter feature, be sure to first review this section so you clearly understand the setup of the default database included on the Voice Mail.

A.1 Using Teleparameter to Set Up a New System

A.1.1 ADJUSTING SYSTEM INFORMATION

The Voice Mail voice processing software is pre-installed on the Voice Mail card before it is shipped to you; however, you may need to customize certain fields on the System Information screens. To do so, use the following procedure:

1. From a telephone, **call into the voice mail** and log into **supervisor mailbox 70**. Note that the default password for the mailbox is the same as the mailbox number, 70.
2. The Voice Mail tutorial session starts. Complete the tutorial. When prompted to record the name and greeting, you may elect to identify this as the supervisor mailbox. When changing the password, be sure to inform the system supervisor of the number you select. When you complete the tutorial, press <*> to prevent it from voicing the next time the box is accessed.
3. The system announces the Main menu:

"To listen to your messages press 1. To send a message press 2. To change your options press 3."

4. To access the Supervisor menu, press 6 (this option is not announced). The system then replies with the Supervisor menu options:

Supervisor Menu	
For Mailbox Administration	Press 1
For Routing Box Administration	Press 2

For Question Box Administration	Press 3
For Port Administration	Press 4
To Change the System Broadcast Message	Press 5
To Change the Voice Mail Day/Night Service	Press 6
To Change the System Time	Press 7
To Change the System Date	Press 8
To Modify System Parameters	Press 9

5. From the Supervisor's menu, press 9 to modify system parameters. The system prompts you to enter the technician password. By default, this password is 1234.
6. At the prompt, enter the number of the parameter you want to change, then, as prompted, the value to which you want to change the parameter. Parameter information is provided in a comprehensive table shown in Section 2.6.2.

   When you complete all modifications, press # to return to the Supervisor's menu.

Note: Refer to section 2.6.2 for information on values you can specify for certain parameters and for information on adjusting parameters in the VM.CFG file.

A.1.1.1 Adjusting Routing Box Information

As indicated in **section 2.4.5.2**, you need to adjust Routing Boxes 800, 801, and 821 to include any single-digit call routing options you want to provide to callers. You must also record the necessary greetings for these boxes. Sample Routing box greetings are provided in **section 3.2.1.**

To record Routing box greetings, follow the procedure provided in **section 3.2.2.**

To modify single-digit call routing, you can follow the procedure in **section 3.2.3** or you can use the Teleparameter feature. To use the Teleparameter feature, follow steps 1 through 4 in the previous procedure, referring to the parameter numbers provided in **section 2.6.2**.

Note: If you enter a parameter number for a parameter that affects a particular box, the system prompts you to enter the Item Number. This number identifies the particular box in which you want to change the parameter. At the Item Number prompt, enter the number of the box.

Note: Refer to section 2.6.2 for information on values you can specify for certain parameters and for information on adjusting parameters in the VM.CFG file.

A.1.1.2 Creating and Adjusting Mailbox Information

To create mailboxes on the system, follow the procedure in **section 3.1.1.** Once you create mailboxes, you can make detailed modifications to the box setups using the Teleparameter feature. To use the Teleparameter feature to adjust mailbox information in boxes you have created on the system, follow steps 1 through 4 in the procedure in **section 2.6.1.2.** For specific parameters you can adjust, refer to **section 2.6.2**.

A.1.1.3 Creating Other Box Types and Adjusting Information

To create other types of boxes, you must first follow the procedures presented earlier in this document to connect a laptop computer to the Voice Mail card and access Box Information setup screens. Once you create the boxes using this technique, you can make detailed modifications to the box setups using the Teleparameter feature. To use the Teleparameter feature to adjust information in boxes already created on the system, follow steps 1 through 4 in the procedure in **section 2.6.1.2.** For specific parameters you can adjust, refer to **section 2.6.2**.

A.1.2 TELEPARAMETER TABLE VALUES

The following table identifies al parameters you can adjust using the teleparameter feature and the entries you can make to indicate specific values for each parameter. Refer to information after this table for additional entries you can make in some fields.

Task	Param. Number	Description	Acceptable Values	Notes:
Account Number Box Setup	2700	Minimum number of digits required for valid entry determination	1 - 9	A prompt for the Item number refers to the box number. Enter the box number.
Account Number Box Setup	2701	Maximum number of digits required for valid entry determination	1 - 30	A prompt for the Item number refers to the box number. Enter the box number.
Account Number Box Setup	2702	Number of seconds to wait before determining all digits are entered	0 - 9	A prompt for the Item number refers to the box number. Enter the box number.
Account Number Box Setup	2703	Action to take after maximum retry attempts if invalid account number is entered	0 = Return 1 = Say 'Goodbye' 2 = Go to another box 3 = Hang up	A prompt for the Item number refers to the box number. Enter the box number.
Account Number Box Setup	2704	Box associated with parameter 2703	(Valid mailbox number)	A prompt for the Item number refers to the box number. Enter the box number.
Account Number Box Setup	2705	Retry attempts to allow if invalid account number entered	0 - 9	A prompt for the Item number refers to the box number. Enter the box number.
Account Number Box Setup	2706	Number of mailbox that owns the Account Number box	(Valid mailbox number)	A prompt for the Item number refers to the box number. Enter the box number.

Task	Param. Number	Description	Acceptable Values	Notes:
Account Number Box Setup	2707	Action to take if account number was previously collected during call	0 = Use the existing account number 1 = Ask for a new account number	A prompt for the Item number refers to the box number. Enter the box number.
Account Number Box Setup	2708	Repeat number entered for confirmation?	1 = Yes 0 = No	A prompt for the Item number refers to the box number. Enter the box number.
Account Number Box Setup	2001	Action to take if valid account number is entered	0 = Return 1 = Say 'Goodbye' 2 = Go to another box 3 = Hang up	A prompt for the Item number refers to the box number. Enter the box number.
Account Number Box Setup	2002	Box associated with parameter number 2001	(Valid box number)	A prompt for the Item number refers to the box number. Enter the box number.
ACD Box Setup	2520	Number of mailbox that owns the ACD box	(Valid mailbox number)	A prompt for the Item number refers to the box number. Enter the box number.
ACD Box Setup	2521	Action to take when trying extension	1 = Always transfer	A prompt for the Item number refers to the box number. Enter the box number.
ACD Box Setup	2522	Criteria by which hunt is started	0 = Start hunting from first agent in group 1 = Start hunting from previous agent	A prompt for the Item number refers to the box number. Enter the box number.
ACD Box Setup	2523	Number of announcements after which caller is offered other options	0 - 99	A prompt for the Item number refers to the box number. Enter the box number.
ACD Box Setup	2524	Rings permitted before no answer determination	0 - 99	A prompt for the Item number refers to the box number. Enter the box number.
ACD Box Setup	2525	Box default operator during day service	(Valid mailbox number)	A prompt for the Item number refers to the box number. Enter the box number.
ACD Box Setup	2526	Box default operator during night service	(Valid mailbox number)	A prompt for the Item number refers to the box number. Enter the box number.

Task	Param. Number	Description	Acceptable Values	Notes:
ACD Box Setup	2527	Action to take if all extensions are busy	0 = Queue the call 1 = Go to another box	A prompt for the Item number refers to the box number. Enter the box number.
ACD Box Setup	2528	Box associated with parameter 2527	(Valid box number)	A prompt for the Item number refers to the box number. Enter the box number.
ACD Box Setup	2529	Action to take if caller elects not to remain in queue	0 = Return 1 = Say 'Goodbye' 2 = Go to another box 3 = Hang up	A prompt for the Item number refers to the box number. Enter the box number.
ACD Box Setup	2530	Box associated with parameter 2529	(Valid box number)	A prompt for the Item number refers to the box number. Enter the box number.
ACD Box Setup	2531	If call is queued, state position in line?	1 = Yes 0 = No	A prompt for the Item number refers to the box number. Enter the box number.
ACD Box Setup	2501 to 2512	ACD rotation box members	(Valid mailbox numbers)	A prompt for the Item number refers to the box number. Enter the box number.
Business Hours Setup	5042	Hour day service begins	00-24	A prompt for the Item number refers to the day of the week. Enter 0 (Sunday) through 6 (Saturday).
Business Hours Setup	5043	(With parameter 5042) Minute day service begins	00 - 59	A prompt for the Item number refers to the day of the week. Enter 0 (Sunday) through 6 (Saturday).
Business Hours Setup	5044	Hour day service ends	00 - 24	A prompt for the Item number refers to the day of the week. Enter 0 (Sunday) through 6 (Saturday).
Business Hours Setup	5045	(With parameter 5044) Minute day service ends	00 - 59	A prompt for the Item number refers to the day of the week. Enter 0 (Sunday) through 6 (Saturday).

Task	Param. Number	Description	Acceptable Values	Notes:
Business Hours Setup	5046	Hour lunch service begins	00 - 24	A prompt for the Item number refers to the day of the week. Enter 0 (Sunday) through 6 (Saturday).
Business Hours Setup	5047	(With parameter 5046) Minute lunch service begins	00 - 59	A prompt for the Item number refers to the day of the week. Enter 0 (Sunday) through 6 (Saturday).
Business Hours Setup	5048	Hour lunch service ends	00 - 24	A prompt for the Item number refers to the day of the week. Enter 0 (Sunday) through 6 (Saturday).
Business Hours Setup	5049	(With parameter 5048) Minute lunch service ends	00 - 59	A prompt for the Item number refers to the day of the week. Enter 0 (Sunday) through 6 (Saturday).
Business Hours Setup	5067	Hour at which greeting is to change to good evening	00 - 24	A prompt for the Item number refers to the day of the week. Enter 0 (Sunday) through 6 (Saturday).
Business Hours Setup	5068	(With parameter 5067) Minute at which greeting is to change to good evening	00 - 59	A prompt for the Item number refers to the day of the week. Enter 0 (Sunday) through 6 (Saturday).
Call Transfer Information Setup	5000	Sequence to initiate an internal transfer	(Refer to technical bulletin and phone documentation)	
Call Transfer Information Setup	5001	Sequence to initiate an external transfer	(Refer to technical bulletin and phone documentation)	
Call Transfer Information Setup	5002	Sequence to complete an internal transfer	(Refer to technical bulletin and phone documentation)	
Call Transfer Information Setup	5003	Sequence to complete an external transfer	(Refer to technical bulletin and phone documentation)	
Call Transfer Information Setup	5004	Sequence to return from no answer on an internal call	(Refer to technical bulletin and phone documentation)	
Call Transfer Information Setup	5005	Sequence to return from no answer on an external call	(Refer to technical bulletin and phone documentation)	

Task	Param. Number	Description	Acceptable Values	Notes:
Call Transfer Information Setup	5006	Sequence to return from busy on an internal call	(Refer to technical bulletin and phone documentation)	
Call Transfer Information Setup	5007	Sequence to return from busy on an external call	(Refer to technical bulletin and phone documentation)	
Call Transfer Information Setup	5008	Sequence to return from call screening on an internal call	(Refer to technical bulletin and phone documentation)	
Call Transfer Information Setup	5009	Sequence to return from call screening on an external call	(Refer to technical bulletin and phone documentation)	
Call Transfer Information Setup	5010	Sequence to transfer an internal 3-way call	(Refer to technical bulletin and phone documentation)	
Call Transfer Information Setup	5011	Sequence to transfer an external 3-way call	(Refer to technical bulletin and phone documentation)	
Call Transfer Information Setup	5014	Should Voice Mail detect dial tone?	1 = Yes 0 = No	
Call Transfer Information Setup	5023	Confirmation digits meaning ‘Yes’	(Refer to technical bulletin and phone documentation)	
Call Transfer Information Setup	5054	Should Voice Mail use transfer bypass digit?	0 = None 1 = First 2 = Last	
Call Transfer Information Setup	5055	Maximum time for 3-way call (minutes)	0 - 30	
Class of Service Setup	7000	Number of days after which Old messages are auto-deleted	0 - 99	A prompt for the Item number refers to the Class of Service number. Enter 0 - 7.
Class of Service Setup	7001	Number of days after which New messages are auto-deleted	0 - 99	A prompt for the Item number refers to the Class of Service number. Enter 0 - 7.
Class of Service Setup	7002	Maximum message length (seconds) for a message	0 - 999	A prompt for the Item number refers to the Class of Service number. Enter 0 - 7.
Class of Service Setup	7003	Maximum number of messages allowed in mailbox	0 - 200	A prompt for the Item number refers to the Class of Service number. Enter 0 - 7.
Class of Service Setup	7004	Maximum greeting length (seconds)	0 - 999	A prompt for the Item number refers to the Class of Service number. Enter 0 - 7.

Task	Param. Number	Description	Acceptable Values	Notes:
Class of Service Setup	7005	Maximum number of personal greetings allowed	0 - 10	A prompt for the Item number refers to the Class of Service number. Enter 0 - 7.
Class of Service Setup	7006	Play menu after greeting to callers?	1 = Yes 0 = No	A prompt for the Item number refers to the Class of Service number. Enter 0 - 7.
Class of Service Setup	7007	Maximum lines allowed to hold for mailbox	0 - 32	A prompt for the Item number refers to the Class of Service number. Enter 0 - 7.
Class of Service Setup	7008	Number of times to try extension before returning to queued caller	0 - 99	A prompt for the Item number refers to the Class of Service number. Enter 0 - 7.
Class of Service Setup	7009	Say position in line to calls in queue?	1 = Yes 0 = No	A prompt for the Item number refers to the Class of Service number. Enter 0 - 7.
Class of Service Setup	7010	Access to Group boxes allowed?	1 = Yes 0 = No	A prompt for the Item number refers to the Class of Service number. Enter 0 - 7.
Class of Service Setup	7011	Supervisor status allowed?	1 = Yes 0 = No	A prompt for the Item number refers to the Class of Service number. Enter 0 - 7.
Class of Service Setup	7012	Caller access to P.A. system allowed?	1 = Yes 0 = No	A prompt for the Item number refers to the Class of Service number. Enter 0 - 7.
Class of Service Setup	7013	Dial-out allowed?	1 = Yes 0 = No	A prompt for the Item number refers to the Class of Service number. Enter 0 - 7.
Class of Service Setup	7014	Faxmail receipt allowed?	1 = Yes 0 = No	A prompt for the Item number refers to the Class of Service number. Enter 0 - 7.
Class of Service Setup	7015	Default operator box during day service hours	(Valid mailbox number)	A prompt for the Item number refers to the Class of Service number. Enter 0 - 7.

Task	Param. Number	Description	Acceptable Values	Notes:
Class of Service Setup	7016	Default operator box during night service hours	(Valid mailbox number)	A prompt for the Item number refers to the Class of Service number. Enter 0 - 7.
Class of Service Setup	7017	When exiting open mailbox, go to box #	(Valid box number)	A prompt for the Item number refers to the Class of Service number. Enter 0 - 7.
Class of Service Setup	7018	Digits callers can press while holding	1 - 9, #	A prompt for the Item number refers to the Class of Service number. Enter 0 - 7.
Class of Service Setup	7020 to 7029	Restricted outcalling numbers	(Any digits)	A prompt for the Item number refers to the Class of Service number. Enter 0 - 7.
Directory Box Setup	2001	Action to take if no digits are dialed	0 = Return 1 = Say 'Goodbye' 2 = Go to another box 3 = Hang up	A prompt for the Item number refers to the box number. Enter the box number.
Directory Box Setup	2002	Box associated with parameter 2001	(Valid box number)	A prompt for the Item number refers to the box number. Enter the box number.
Directory Box Setup	2600	Number of time to play greeting	1 - 3	A prompt for the Item number refers to the box number. Enter the box number.
Directory Box Setup	2601	Box associated with parameter 2602	(Valid box number)	A prompt for the Item number refers to the box number. Enter the box number.
Directory Box Setup	2602	Action to take if requested name is not found	0 = Return 1 = Say 'Goodbye' 2 = Go to another box 3 = Hang up	A prompt for the Item number refers to the box number. Enter the box number.
Directory Box Setup	2603	Say box number before transferring call?	1 = Yes 0 = No	A prompt for the Item number refers to the box number. Enter the box number.
Directory Box Setup	2604	Allow callers to hear complete directory listing?	1 = Yes 0 = No	A prompt for the Item number refers to the box number. Enter the box number.

Task	Param. Number	Description	Acceptable Values	Notes:
Directory Box Setup	2605	Maximum number of digits to collect from callers	1 - 9	A prompt for the Item number refers to the box number. Enter the box number.
General Information Setup	5017	Fast-forwarded / rewind seconds	0 - 10	
General Information Setup	5024	Technician password	Up to 10 digits	
General Information Setup	5025	Customer password	Up to 10 digits	
General Information Setup	5027	Digits needed to get line for external call	(Refer to technical bulletin and phone documentation)	
General Information Setup	5053	Store call log to:	0 = None 1 = File 2 = Printer	
General Information Setup	5056	(With parameter 5057) Maximum number of minutes call can last before being rerouted	0 - 30	
General Information Setup	5057	(With parameter 5056) Box to which calls are re-routed	(Valid box number)	
General Information Setup	5065	Exit to DOS hour	00-23	
General Information Setup	5066	Exit to DOS minutes	00-59	
Group Box Setup	2800	Maximum length of a message (seconds) that can be sent to this box	10 - 999	A prompt for the Item number refers to the box number. Enter the box number.
Group Box Setup	2801 to 2850	Group box members	(Valid box numbers)	A prompt for the Item number refers to the box number. Enter the box number.
Holiday Schedule Setup	5050	(With parameter 5051) Holiday month	00-12	A prompt for the Item number refers to the holiday number. Enter 1 through 20.
Holiday Schedule Setup	5051	(With parameter 5050) Holiday date	01-31	A prompt for the Item number refers to the holiday number. Enter 1 through 20.

Task	Param. Number	Description	Acceptable Values	Notes:
Holiday Schedule Setup	5052	Box to which calls are routed during holiday	(Valid box number)	A prompt for the Item number refers to the holiday number. Enter 1 through 20.
Line Information Setup	1000	Box to which calls on this line are routed during day service hours	(Valid box number)	A prompt for the Item number refers to the line number. Enter the line number.
Line Information Setup	1001	Box to which calls on this line are routed during night service hours	(Valid box number)	A prompt for the Item number refers to the line number. Enter the line number.
Line Information Setup	1002	Box to which calls on this line are routed during lunch service hours	(Valid box number)	A prompt for the Item number refers to the line number. Enter the line number.
Line Information Setup	1003	Rings before call is answered during day service hours	1 - 99	A prompt for the Item number refers to the line number. Enter the line number.
Line Information Setup	1004	Rings before call is answered during night service hours	1 - 99	A prompt for the Item number refers to the line number. Enter the line number.
Line Information Setup	1005	Rings before call is answered during lunch service hours	1 - 99	A prompt for the Item number refers to the line number. Enter the line number.
Line Information Setup	1006	Outgoing calls allowed on this line?	1 = Yes 0 = No	A prompt for the Item number refers to the line number. Enter the line number.
Line Information Setup	1007	Line belongs to Line Group A?	1 = Yes 0 = No	A prompt for the Item number refers to the line number. Enter the line number.
Line Information Setup	1008	Line belongs to Line Group B?	1 = Yes 0 = No	A prompt for the Item number refers to the line number. Enter the line number.
Line Information Setup	1009	Line belongs to Line Group C?	1 = Yes 0 = No	A prompt for the Item number refers to the line number. Enter the line number.

Task	Param. Number	Description	Acceptable Values	Notes:
Line Information Setup	1010	Line belongs to Line Group D?	1 = Yes 0 = No	A prompt for the Item number refers to the line number. Enter the line number.
Mailbox Setup	2000	Mailbox owner's last name	(Digits that will allow the Dial-by-Name directory feature access this mailbox)	A prompt for the Item number refers to the box number. Enter the box number.
Mailbox Setup	2001	Action to be taken after caller leaves message	0 = Return 1 = Say 'Goodbye' 2 = Go to another box 3 = Hang up	A prompt for the Item number refers to the box number. Enter the box number.
Mailbox Setup	2002	Box associated with parameter 2001	(Valid box number)	A prompt for the Item number refers to the box number. Enter the box number.
Mailbox Setup	2100	Mailbox password	(Up to maximum digits specified during setup)	A prompt for the Item number refers to the box number. Enter the box number.
Mailbox Setup	2101	Sequence to turn on message waiting lamp	(See technical bulletin or phone documentation)	A prompt for the Item number refers to the box number. Enter the box number.
Mailbox Setup	2102	Sequence to turn off message waiting lamp	(See technical bulletin or phone documentation)	A prompt for the Item number refers to the box number. Enter the box number.
Mailbox Setup	2110	Box associated with parameter 2111	(Valid box number)	A prompt for the Item number refers to the box number. Enter the box number.
Mailbox Setup	2111	Action to be taken if caller chooses "other options"	0 = Return 1 = Say 'Goodbye' 2 = Go to another box 3 = Hang up	A prompt for the Item number refers to the box number. Enter the box number.
Mailbox Setup	2112	Mailbox has access to only Hotel guest privileges?	1 = Yes 0 = No	A prompt for the Item number refers to the box number. Enter the box number. You can modify only one personal distribution list for the mailbox using the Teleparameter feature

Task	Param. Number	Description	Acceptable Values	Notes:
Mailbox Setup	2113	Class of service assigned to mailbox	0 - 7	A prompt for the Item number refers to the box number. Enter the box number.
Mailbox Setup	2114	Mailbox to which this mailbox is a client, if this is a restricted mailbox	(Valid mailbox number)	A prompt for the Item number refers to the box number. Enter the box number.
Mailbox Setup	2115	Language in which greeting is to play if call is via D.I.D	0 - 9	A prompt for the Item number refers to the box number. Enter the box number.
Mailbox Setup	2120	Type of transfer	0 = None 1 = Blind 2 = Wait for answer 3 = Screen 4 = Wait for ring	A prompt for the Item number refers to the box number. Enter the box number.
Mailbox Setup	2121	Caller's name voiced upon pickup?	0 = No 1 = Yes	A prompt for the Item number refers to the box number. Enter the box number.
Mailbox Setup	2122	Number of rings within which called party must answer before system determines a no answer condition	Number of rings	A prompt for the Item number refers to the box number. Enter the box number.
Mailbox Setup	2123	Call transfer schedule	0 = Always 1 = Day only 2 = Night only 3 = Schedule A 4 = Schedule B 5 = Schedule C 6 = Schedule D	A prompt for the Item number refers to the box number. Enter the box number.
Mailbox Setup	2124	3-way calling used	0 = Always 1 = Day only 2 = Night only 3 = Schedule A 4 = Schedule B 5 = Schedule C 6 = Schedule D	A prompt for the Item number refers to the box number. Enter the box number.
Mailbox Setup	2125	Record conversation?	1 = Yes 0 = No	A prompt for the Item number refers to the box number. Enter the box number.
Mailbox Setup	2126	Transfer destination	Extension number	A prompt for the Item number refers to the box number. Enter the box number.

Task	Param. Number	Description	Acceptable Values	Notes:
Mailbox Setup	2130	(With parameter 2134) Type of pager	0 = None 1 = Tone-only pager (no display) 2 = Display pager	A prompt for the Item number refers to the box number. Enter the box number.
Mailbox Setup	2131	(With parameter 2134) Minutes between calls to pager	00 - 20	A prompt for the Item number refers to the box number. Enter the box number.
Mailbox Setup	2132	(With parameter 2134) Number of times to call pager	00 - 99	A prompt for the Item number refers to the box number. Enter the box number.
Mailbox Setup	2133	(With parameter 2134) Schedule during which calls should be sent to pager	0 = Always 1 = Day only 2 = Night only 3 = Schedule A 4 = Schedule B 5 = Schedule C 6 = Schedule D	A prompt for the Item number refers to the box number. Enter the box number.
Mailbox Setup	2134	Mailbox owner's pager number	(Pager number)	A prompt for the Item number refers to the box number. Enter the box number.
Mailbox Setup	2141	Action to be taken after personal greeting is played	0 = Wait for a digit 1 = Begin recording a message 2 = Page the mailbox owner 3 = Record a message, then page the mailbox owner	A prompt for the Item number refers to the box number. Enter the box number.
Mailbox Setup	2142	Hours after which messages are to be auto-forwarded	0 - 999	A prompt for the Item number refers to the box number. Enter the box number.
Mailbox Setup	2143	(With parameter 2142) Box to which new messages are to be auto-forwarded	(Valid mailbox number)	A prompt for the Item number refers to the box number. Enter the box number.
Mailbox Setup	2144	(With parameters 2142 and 2143) Schedule during which auto-forwarding is to be active	0 = Always 1 = Day only 2 = Night only 3 = Schedule A 4 = Schedule B 5 = Schedule C 6 = Schedule D	A prompt for the Item number refers to the box number. Enter the box number.

Task	Param. Number	Description	Acceptable Values	Notes:
Mailbox Setup	2151	(With parameter 2155) Number of times to run the message delivery cycle.	0 - 99	A prompt for the Item number refers to the box number. Enter the box number. You can modify only one message delivery set up for the mailbox using the Teleparameter feature.
Mailbox Setup	2152	(With parameter 2155) Number of times number is to be called	0 - 99	A prompt for the Item number refers to the box number. Enter the box number. You can modify only one message delivery set up for the mailbox using the Teleparameter feature.
Mailbox Setup	2153	(With parameter 2155) Minutes in between calls to number	2 - 99	A prompt for the Item number refers to the box number. Enter the box number. You can modify only one message delivery set up for the mailbox using the Teleparameter feature.
Mailbox Setup	2154	(With parameter 2155) Schedule during which message delivery is active	0 = Always 1 = Day only 2 = Night only 3 = Schedule A 4 = Schedule B 5 = Schedule C 6 = Schedule D	A prompt for the Item number refers to the box number. Enter the box number. You can modify only one message delivery set up for the mailbox using the Teleparameter feature.

Task	Param. Number	Description	Acceptable Values	Notes:
Mailbox Setup	2155	Number to call for message delivery	(Phone or beeper number)	A prompt for the Item number refers to the box number. Enter the box number. You can modify only one message delivery set up for the mailbox using the Teleparameter feature.
Mailbox Setup	2159	Personal distribution list 1 enabled for mailbox?	1 = Yes 0 = No	A prompt for the Item number refers to the box number. Enter the box number. You can modify only one personal distribution list for the mailbox using the Teleparameter feature.
Mailbox Setup	2160 to 2179	Personal distribution list 1 members	(Valid mailbox numbers)	A prompt for the Item number refers to the box number. Enter the box number. You can modify only one personal distribution list for the mailbox using the Teleparameter feature.
Other Customizations Setup	5018	Maximum box length caller can dial	2 - 4	
Other Customizations Setup	5019	Seconds of initial pause before main greeting is played	0 - 10	
Other Customizations Setup	5020	When Voice Mail should play time and date	0 = When caller asks 1 = Before each message 2 = After each message	
Other Customizations Setup	5021	Play called party's name when call is answered?	1 = Yes 0 = No	
Other Customizations Setup	5022	Announce call when call is answered?	1 = Yes 0 = No	
Other Customizations Setup	5076 to 5079	Custom field (use under direction of technical support)	---	
Other Customizations Setup	5086 to 5089	Debug field (use under direction of technical support)	---	

Task	Param. Number	Description	Acceptable Values	Notes:
Question Box Setup	2001	Action to take after questions are answered	0 = Return 1 = Say 'Goodbye' 2 = Go to another box 3 = Hang up	A prompt for the Item number refers to the box number. Enter the box number.
Question Box Setup	2002	Box associated with parameter 2404	(Valid box number)	A prompt for the Item number refers to the box number. Enter the box number.
Question Box Setup	2400	Number of mailbox that owns the Question box	(Valid mailbox number)	A prompt for the Item number refers to the box number. Enter the box number.
Question Box Setup	2401	Replay digit answers for verification?	1 = Yes 0 = No	A prompt for the Item number refers to the box number. Enter the box number.
Question Box Setup	2402	Voice answers? (versus digit)	1 = Yes 0 = No	A prompt for the Item number refers to the box number. Enter the box number.
Question Box Setup	2403	Trigger owner mailbox notification of answers in this box?	1 = Yes 0 = No	A prompt for the Item number refers to the box number. Enter the box number.
Question Box Setup	2404	Digits caller can press to exit this box	0 - 9, *, #	A prompt for the Item number refers to the box number. Enter the box number.
Question Box Setup	2410	Answer type for Question 10	0 = Voice 1 = Digits	A prompt for the Item number refers to the box number. Enter the box number.
Question Box Setup	2411	Answer type for Question 1	0 = Voice 1 = Digits	A prompt for the Item number refers to the box number. Enter the box number.
Question Box Setup	2412	Answer type for Question 2	0 = Voice 1 = Digits	A prompt for the Item number refers to the box number. Enter the box number.
Question Box Setup	2413	Answer type for Question 3	0 = Voice 1 = Digits	A prompt for the Item number refers to the box number. Enter the box number.

Task	Param. Number	Description	Acceptable Values	Notes:
Question Box Setup	2414	Answer type for Question 4	0 = Voice 1 = Digits	A prompt for the Item number refers to the box number. Enter the box number.
Question Box Setup	2415	Answer type for Question 5	0 = Voice 1 = Digits	A prompt for the Item number refers to the box number. Enter the box number.
Question Box Setup	2416	Answer type for Question 6	0 = Voice 1 = Digits	A prompt for the Item number refers to the box number. Enter the box number.
Question Box Setup	2417	Answer type for Question 7	0 = Voice 1 = Digits	A prompt for the Item number refers to the box number. Enter the box number.
Question Box Setup	2418	Answer type for Question 8	0 = Voice 1 = Digits	A prompt for the Item number refers to the box number. Enter the box number.
Question Box Setup	2419	Answer type for Question 9	0 = Voice 1 = Digits	A prompt for the Item number refers to the box number. Enter the box number.
Question Box Setup	2420	If the answer type is digits, minimum number of digits that must be entered for valid answer to question 10.	1 - 999	A prompt for the Item number refers to the box number. Enter the box number.
Question Box Setup	2421	If the answer type is digits, minimum number of digits that must be entered for valid answer to question 1.	1 - 999	A prompt for the Item number refers to the box number. Enter the box number.
Question Box Setup	2422	If the answer type is digits, minimum number of digits that must be entered for valid answer to question 2.	1 - 999	A prompt for the Item number refers to the box number. Enter the box number.
Question Box Setup	2423	If the answer type is digits, minimum number of digits that must be entered for valid answer to question 3.	1 - 999	A prompt for the Item number refers to the box number. Enter the box number.
Question Box Setup	2424	If the answer type is digits, minimum number of digits that must be entered for valid answer to question 4.	1 - 999	A prompt for the Item number refers to the box number. Enter the box number.

Task	Param. Number	Description	Acceptable Values	Notes:
Question Box Setup	2425	If the answer type is digits, minimum number of digits that must be entered for valid answer to question 5.	1 - 999	A prompt for the Item number refers to the box number. Enter the box number.
Question Box Setup	2426	If the answer type is digits, minimum number of digits that must be entered for valid answer to question 6.	1 - 999	A prompt for the Item number refers to the box number. Enter the box number.
Question Box Setup	2427	If the answer type is digits, minimum number of digits that must be entered for valid answer to question 7.	1 - 999	A prompt for the Item number refers to the box number. Enter the box number.
Question Box Setup	2428	If the answer type is digits, minimum number of digits that must be entered for valid answer to question 8.	1 - 999	A prompt for the Item number refers to the box number. Enter the box number.
Question Box Setup	2429	If the answer type is digits, minimum number of digits that must be entered for valid answer to question 9.	1 - 999	A prompt for the Item number refers to the box number. Enter the box number.
Question Box Setup	2430	If the answer type is digits, maximum number of digits that can be entered for valid answer to question 10.	1 - 999	A prompt for the Item number refers to the box number. Enter the box number.
Question Box Setup	2431	If the answer type is digits, maximum number of digits that can be entered for valid answer to question 1.	1 - 999	A prompt for the Item number refers to the box number. Enter the box number.
Question Box Setup	2432	If the answer type is digits, maximum number of digits that can be entered for valid answer to question 2.	1 - 999	A prompt for the Item number refers to the box number. Enter the box number.
Question Box Setup	2433	If the answer type is digits, maximum number of digits that can be entered for valid answer to question 3.	1 - 999	A prompt for the Item number refers to the box number. Enter the box number.
Question Box Setup	2434	If the answer type is digits, maximum number of digits that can be entered for valid answer to question 4.	1 - 999	A prompt for the Item number refers to the box number. Enter the box number.
Question Box Setup	2435	If the answer type is digits, maximum number of digits that can be entered for valid answer to question 5.	1 - 999	A prompt for the Item number refers to the box number. Enter the box number.

Task	Param. Number	Description	Acceptable Values	Notes:
Question Box Setup	2436	If the answer type is digits, maximum number of digits that can be entered for valid answer to question 6.	1 - 999	A prompt for the Item number refers to the box number. Enter the box number.
Question Box Setup	2437	If the answer type is digits, maximum number of digits that can be entered for valid answer to question 7.	1 - 999	A prompt for the Item number refers to the box number. Enter the box number.
Question Box Setup	2438	If the answer type is digits, maximum number of digits that can be entered for valid answer to question 8.	1 - 999	A prompt for the Item number refers to the box number. Enter the box number.
Question Box Setup	2439	If the answer type is digits, maximum number of digits that can be entered for valid answer to question 9.	1 - 999	A prompt for the Item number refers to the box number. Enter the box number.
Question Box Setup	2440	Number of seconds of silence before Voice Mail determines caller has finished entering digits or speaking the answer for question 10.	1 - 99	A prompt for the Item number refers to the box number. Enter the box number.
Question Box Setup	2441	Number of seconds of silence before Voice Mail determines caller has finished entering digits or speaking the answer for question 1.	1 - 99	A prompt for the Item number refers to the box number. Enter the box number.
Question Box Setup	2442	Number of seconds of silence before Voice Mail determines caller has finished entering digits or speaking the answer for question 2.	1 - 99	A prompt for the Item number refers to the box number. Enter the box number.
Question Box Setup	2443	Number of seconds of silence before Voice Mail determines caller has finished entering digits or speaking the answer for question 3.	1 - 99	A prompt for the Item number refers to the box number. Enter the box number.
Question Box Setup	2444	Number of seconds of silence before Voice Mail determines caller has finished entering digits or speaking the answer for question 4.	1 - 99	A prompt for the Item number refers to the box number. Enter the box number.
Question Box Setup	2445	Number of seconds of silence before Voice Mail determines caller has finished entering digits or speaking the answer for question 5.	1 - 99	A prompt for the Item number refers to the box number. Enter the box number.

Task	Param. Number	Description	Acceptable Values	Notes:
Question Box Setup	2446	Number of seconds of silence before Voice Mail determines caller has finished entering digits or speaking the answer for question 6.	1 - 99	A prompt for the Item number refers to the box number. Enter the box number.
Question Box Setup	2447	Number of seconds of silence before Voice Mail determines caller has finished entering digits or speaking the answer for question 7.	1 - 99	A prompt for the Item number refers to the box number. Enter the box number.
Question Box Setup	2448	Number of seconds of silence before Voice Mail determines caller has finished entering digits or speaking the answer for question 8.	1 - 99	A prompt for the Item number refers to the box number. Enter the box number.
Question Box Setup	2449	Number of seconds of silence before Voice Mail determines caller has finished entering digits or speaking the answer for question 9.	1 - 99	A prompt for the Item number refers to the box number. Enter the box number.
Routing Box Setup	2001	Action to take if no digits dialed	0 = Return 1 = Say ‘Goodbye’ 2 = Go to another box 3 = Hang up	
Routing Box Setup	2002	Box associated with parameter 2001	(Valid box number)	
Routing Box Setup	2300	Single-digit dialing destination for digit 0	(Valid box number)	A prompt for the Item number refers to the box number. Enter the box number.
Routing Box Setup	2301	Single-digit dialing destination for digit 1	(Valid box number)	A prompt for the Item number refers to the box number. Enter the box number.
Routing Box Setup	2302	Single-digit dialing destination for digit 2	(Valid box number)	A prompt for the Item number refers to the box number. Enter the box number.
Routing Box Setup	2303	Single-digit dialing destination for digit 3	(Valid box number)	A prompt for the Item number refers to the box number. Enter the box number.
Routing Box Setup	2304	Single-digit dialing destination for digit 4	(Valid box number)	A prompt for the Item number refers to the box number. Enter the box number.

Task	Param. Number	Description	Acceptable Values	Notes:
Routing Box Setup	2305	Single-digit dialing destination for digit 5	(Valid box number)	A prompt for the Item number refers to the box number. Enter the box number.
Routing Box Setup	2306	Single-digit dialing destination for digit 6	(Valid box number)	A prompt for the Item number refers to the box number. Enter the box number.
Routing Box Setup	2307	Single-digit dialing destination for digit 7	(Valid box number)	A prompt for the Item number refers to the box number. Enter the box number.
Routing Box Setup	2308	Single-digit dialing destination for digit 8	(Valid box number)	A prompt for the Item number refers to the box number. Enter the box number.
Routing Box Setup	2309	Single-digit dialing destination for digit 9	(Valid box number)	A prompt for the Item number refers to the box number. Enter the box number.
Routing Box Setup	2310	Single-digit dialing destination for *	(Valid box number)	A prompt for the Item number refers to the box number. Enter the box number.
Routing Box Setup	2311	Single-digit dialing destination for #	(Valid box number)	A prompt for the Item number refers to the box number. Enter the box number.
Routing Box Setup	2312	Single-digit dialing destination for non-DTMF digit (voice)	(Valid box number)	A prompt for the Item number refers to the box number. Enter the box number.
Routing Box Setup	2313	Number of mailbox that owns the Routing box	(Valid box number)	
Routing Box Setup	2314	Box to which calls are transferred if invalid digits dialed	(Valid box number)	A prompt for the Item number refers to the box number. Enter the box number.
Routing Box Setup	2315	Number of times to play greeting	1 - 3	
Routing Box Setup	2316	Seconds to wait for a digit	0 - 9	

Task	Param. Number	Description	Acceptable Values	Notes:
Routing Box Setup	2317	Basis used to route call	0 = Digits dialed 1 = Day of week 2 = Sequence number 3 = Database lookup 4 = Day or Night service	A prompt for the Item number refers to the box number. Enter the box number.
Routing Box Setup	2318	When digits received, wait for more digits?	1 = Yes 0 = No	A prompt for the Item number refers to the box number. Enter the box number.
Technical Information Setup	5012	Hookflash length (milliseconds)	100 - 5000	
Technical Information Setup	5013	Pause length (milliseconds)	10 - 5000	
Technical Information Setup	5015	Seconds of silence before Voice Mail ends recording	0 - 99	
Technical Information Setup	5016	Seconds of non-silence before Voice Mail ends recording	0 - 99	
Technical Information Setup	5026	Disconnect digit sequence	(Refer to technical bulletin and phone documentation)	
Technical Information Setup	5063	Hour at which system automatically updates MWI	00 - 23	
Technical Information Setup	5064	(With parameter 5063) Minute at which system automatically updates MWI	00 - 59	
VM.CFG Setup	9001	transbypass=	See the Installation Manual.	
VM.CFG Setup	9003	dtmfon=	See the Installation Manual.	
VM.CFG Setup	9004	ignorenonsilence	See the Installation Manual.	
VM.CFG Setup	9007	internal=	See the Installation Manual.	
VM.CFG Setup	9011	pagetime=	See the Installation Manual.	
VM.CFG Setup	9012	pagerretry=	See the Installation Manual.	
VM.CFG Setup	9014	maxpasswordlength=	See the Installation Manual.	
VM.CFG Setup	9015	greetsil=	See the Installation Manual.	
VM.CFG Setup	9017	notifyreps=	See the Installation Manual.	
VM.CFG Setup	9019	interdigit=	See the Installation Manual.	
VM.CFG Setup	9023	detectpulse	See the Installation Manual.	
VM.CFG Setup	9025	auditdatabase	See the Installation Manual.	

Task	Param. Number	Description	Acceptable Values	Notes:
VM.CFG Setup	9026	responsetime=	See the Installation Manual.	
VM.CFG Setup	9099	pa.init=	See the Installation Manual.	
VM.CFG Setup	9100	pa.cancel=	See the Installation Manual.	
VM.CFG Setup	9101	tutorialreps=	See the Installation Manual.	
VM.CFG Setup	9102	pa.repeats=	See the Installation Manual.	
VM.CFG Setup	9103	novideomemory	See the Installation Manual.	
VM.CFG Setup	9104	offhookdelay=	See the Installation Manual.	
VM.CFG Setup	9105	hardwareint=	See the Installation Manual.	
VM.CFG Setup	9106	ringon=	See the Installation Manual.	
VM.CFG Setup	9107	minimummessage=	See the Installation Manual.	
VM.CFG Setup	9108	maxinactive=	See the Installation Manual.	
VM.CFG Setup	9109	maxlockup=	See the Installation Manual.	
VM.CFG Setup	9118	languages=	See the Installation Manual.	
VM.CFG Setup	9120	dtmfsendon=	See the Installation Manual.	
VM.CFG Setup	9121	dtmfsendoff=	See the Installation Manual.	
VM.CFG Setup	9122	pa.busy=	See the Installation Manual.	
VM.CFG Setup	9123	lunchoperatorisday	See the Installation Manual.	
VM.CFG Setup	9124	samplingrate=	See the Installation Manual.	
VM.CFG Setup	9125	databaseline=	See the Installation Manual.	
VM.CFG Setup	9126	ignoredisconnects	See the Installation Manual.	
VM.CFG Setup	9127	nonametransfer	See the Installation Manual.	
VM.CFG Setup	9135	norecordbeep	See the Installation Manual.	
VM.CFG Setup	9144	repeatmw=	See the Installation Manual.	
VM.CFG Setup	9146	deleteafterfwd	See the Installation Manual.	
VM.CFG Setup	9150	remotepause=	See the Installation Manual.	
VM.CFG Setup	9160	ringreset=	See the Installation Manual.	
VM.CFG Setup	9161	notifyrings=	See the Installation Manual.	
VM.CFG Setup	9162	assumepageconfirm	See the Installation Manual.	
VM.CFG Setup	9163	assumehold=	See the Installation Manual.	

Task	Param. Number	Description	Acceptable Values	Notes:
VM.CFG Setup	9165	externalfax	See the Installation Manual.	
VM.CFG Setup	9166	faxtimeout=	See the Installation Manual.	
VM.CFG Setup	9167	nopcbeep	See the Installation Manual.	
VM.CFG Setup	9174	cdspeed=	See the Installation Manual.	
VM.CFG Setup	9182	ignoreinitialdisconnect	See the Installation Manual.	
VM.CFG Setup	9190	lineaccessontransfer	See the Installation Manual.	
VM.CFG Setup	9192	24hourclockdisplay	See the Installation Manual.	
VM.CFG Setup	9203	linesconnected=	See the Installation Manual.	
VM.CFG Setup	9206	qboxposconfirm	See the Installation Manual.	
VM.CFG Setup	9207	qboxdataprint	See the Installation Manual.	
VM.CFG Setup	9208	qboxarchive	See the Installation Manual.	
VM.CFG Setup	9209	pagerprefix=	See the Installation Manual.	
VM.CFG Setup	9210	pagerappend=	See the Installation Manual.	
VM.CFG Setup	9214	omitgroupsender	See the Installation Manual.	
VM.CFG Setup	9216	pagertrail=	See the Installation Manual.	
VM.CFG Setup	9218	longhookflash=	See the Installation Manual.	
VM.CFG Setup	9219	cp.dialtone=	See the Installation Manual.	
VM.CFG Setup	9220	cp.busy=	See the Installation Manual.	
VM.CFG Setup	9221	cp.invalid=	See the Installation Manual.	
VM.CFG Setup	9222	cp.dnd=	See the Installation Manual.	
VM.CFG Setup	9223	cp.ans=	See the Installation Manual.	
VM.CFG Setup	9224	cp.initring=	See the Installation Manual.	
VM.CFG Setup	9225	cp.interring=	See the Installation Manual.	
VM.CFG Setup	9226	cp.noans=	See the Installation Manual.	
VM.CFG Setup	9227	onhookdtmf	See the Installation Manual.	
VM.CFG Setup	9229	answerack=	See the Installation Manual.	
VM.CFG Setup	9232	senddisconnect=	See the Installation Manual.	
VM.CFG Setup	9256	playbackdelay=	See the Installation Manual.	
VM.CFG Setup	9273	cp.disconnect=	See the Installation Manual.	

Task	Param. Number	Description	Acceptable Values	Notes:
VM.CFG Setup	9282	qboxdataprinteject	See the Installation Manual.	
VM.CFG Setup	9283	qboxuseconfirmnumbers	See the Installation Manual.	
VM.CFG Setup	9289	qboxhideacctnumbers	See the Installation Manual.	
VM.CFG Setup	9291	keepmessagesnew	See the Installation Manual.	
VM.CFG Setup	9295	pooledring=	See the Installation Manual.	
VM.CFG Setup	9296	mboxdefaultdigit=	See the Installation Manual.	
VM.CFG Setup	9301	greeting.noanswer=	See the Installation Manual.	
VM.CFG Setup	9302	greeting.busy=	See the Installation Manual.	
VM.CFG Setup	9303	greeting.dnd=	See the Installation Manual.	
VM.CFG Setup	9337	noaccountinlog	See the Installation Manual.	
VM.CFG Setup	9339	greeting.night=	See the Installation Manual.	
VM.CFG Setup	9340	faxpause=	See the Installation Manual.	
VM.CFG Setup	9342	samecallfaxok	See the Installation Manual.	
VM.CFG Setup	9343	mwonreps=	See the Installation Manual.	
VM.CFG Setup	9344	mwoffreps=	See the Installation Manual.	
VM.CFG Setup	9346	faxprefix=	See the Installation Manual.	
VM.CFG Setup	9349	faxgeneraldelivery=	See the Installation Manual.	
VM.CFG Setup	9351	initialpauseidp=	See the Installation Manual.	
VM.CFG Setup	9352	directoryidp=	See the Installation Manual.	
VM.CFG Setup	9353	messagepausetime=	See the Installation Manual.	
VM.CFG Setup	9354	sharefaxports	See the Installation Manual.	
VM.CFG Setup	9359	flowcontrol=	See the Installation Manual.	
VM.CFG Setup	9360	fastacdtransfer	See the Installation Manual.	
VM.CFG Setup	9361	pmsviatextfiles	See the Installation Manual.	
VM.CFG Setup	9364	serviceobservecode=	See the Installation Manual.	
VM.CFG Setup	9365	acdpause=	See the Installation Manual.	
VM.CFG Setup	9383	wakeuprings=	See the Installation Manual.	
VM.CFG Setup	9384	ivrpromptlanguage=	See the Installation Manual.	
VM.CFG Setup	9388	volume=	See the Installation Manual.	

Task	Param. Number	Description	Acceptable Values	Notes:
VM.CFG Setup	9389	noserialmwrefresh	See the Installation Manual.	
VM.CFG Setup	9390	basiccptones	See the Installation Manual.	
VM.CFG Setup	9392	extrarotarytime=	See the Installation Manual.	
VM.CFG Setup	9393	transferring=	See the Installation Manual.	
VM.CFG Setup	9394	dialtonefrequency=	See the Installation Manual.	
VM.CFG Setup	9395	dialtone2frequency=	See the Installation Manual.	
Serial Number	4000	Voices the system's serial number.	—	

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APPENDIX B. CUSTOMIZING THE CORPORATE OFFICE DX CONFIGURATION

B.1 Setting the Defaults

The Corporate Office DX is ready to go right out of the box. Please refer to your DX-80 *Installation and Maintenance Manual* for additional information on system parameters. If you want to customize its operation, you can access its configuration screens as described in the next section. Refer to section 3.0 on page 15, for information on connecting a laptop to the Corporate Office DX serial interface.

B.2 Checking System Information Settings

The entries in this section are default screen entries made to System Information screens when you ran the setup utility. If you have completed First Time Setup and the integration is not performing as intended (e.g., supported features are not functioning properly), first verify that the correct phone system has been chosen. Next, you may need to verify that each entry in the table below displays in the corresponding field of the appropriate System Information screen.

To access System Information screens through the serial communications screen interface:

1. From the Line Status screen, press [**F10**]. The Main menu displays and you are prompted to enter a password.
2. Type **1234** then press [**ENTER**] to log in using the default Technician level password. You can change both the Technician and Customer level passwords on the General Information screen.
3. From the Main menu, select System Information. The System Information menu displays.
4. Select the screen you want to review or modify from the System Information menu. When you have made any necessary modifications to the screen, press [**F10**] to save the changes. You return to the System Information menu.

System Menu, General Information Screen			
Digits to get a line on external call	9,T		

System Menu, Call Transfer Screen			
	Internal Calls		External Calls
Sequence to initiate a transfer	!,	Sequence to initiate a transfer	!,9,T
Sequence to complete a transfer		Sequence to complete a transfer	
Sequence to transfer 3-way call	!3	Sequence to transfer 3-way call	!3
Sequence to return from busy	!	Sequence to return from busy	!
Sequence to return from no-ans.	!	Sequence to return from no-ans.	!
Sequence to return from call screening Detect dialtone?	!1 Yes	Sequence to return from call screening Use transfer bypass digit?	!1 Last Digit

System Menu, Technical Screen			
Disconnect Digit Sequence		Hookflash Length	600
Pause Length Seconds of Non-Silence to End Recording	1000 99	Seconds of Silence to End Recording	4

System Menu, Optional Features, Other Customization Screen			
Maximum Box Length (when caller is dialing)	3	Initial Pause	0
Custom	0	Custom	0
Custom	0	Custom	0

B.3 Checking Box Information Settings

The entries in this section are default screen entries made to box setup screens when you ran the Corporate Office DX setup utility. To confirm that your integration will function as intended, verify that each entry in the table below displays in the corresponding field of the appropriate box setup screen.

To access box information screens through the serial communications screen interface:

1. From the Line Status screen, press [F10]. The Main menu displays and you are prompted to enter a system password.
2. Type **1234** then press [ENTER] to log in using the default Technician level password. You can change both the Technician and Customer level passwords on the General Information screen.
3. From the Main menu, select Box Information. The Box Information menu displays.
4. Select the screen you want to review or modify from the Boxes menu. When you have made any necessary modifications to the screen, press [F10] to save the changes. You return to the Box Information menu.

Box Menu, Mail box, (Page 1) Screen			
Sequence to turn on message-waiting lamp (analog)	#96XWW	Sequence to turn off message-waiting lamp (analog)	#*96X

B.4 Checking the Voice Mail Configuration (VM.CFG) File

The entries in this section are default screen entries made to the VM.CFG file when you ran the setup utility. To confirm that your integration will function as intended, verify that each entry in the table below displays in the VM.CFG file.

- On DOS-based voice processing systems like the Corporate Office DX, you must shut down the voice mail system to review and edit the VM.CFG file. To do so, press [ESC]. At the prompt to enter a password, enter the Technician password. The system stops processing new calls and waits while calls in progress are completed. Once all ports are clear, the system shuts down the voice mail system software program.
- To review and modify the VM.CFG file, you use an editor. To invoke the DOS editor, for example, from a DOS prompt, type EDIT VM.CFG and press [ENTER]. To exit the file once you have reviewed it, press [Alt+F] then press [X]. If you modified the file, you are prompted to save your changes. To save your changes press [ENTER] or [Y] at the prompt to save changes.
- To restart the system, type GOVM at the \VM directory prompt, then press [ENTER].

The contents of the VM.CFG file are as follows.

VM.CFG File Entries for DX-80/Corporate Office integrated system
auto start
omit group sender
add linefeed
audit database
greet sil = 2
response time = 4
minimum message = 2
repeat mw = 2
ics inskin = bicom
caption = DX-80/Bicom_integration_version
pa.init = !400
pa.cancel = !
pa.repeats = 1
pa.busy = !
hardware int = 0
offhook delay = 100
cd speed = 0

B.5 Checking the TRANS.TXT File

The entries in this section are default screen entries made to the TRANS.TXT file when you ran the system setup utility. To confirm that your integration will function as intended, verify that each entry in the table below displays in the TRANS.TXT file.

- On DOS-based voice mail systems like the Corporate Office DX, you must shut down the voice mail system to review and edit the TRANS.TXT file. To do so, press [ESC]. At the prompt to enter a password, enter the Technician password. The system stops processing new calls and waits while calls in progress are completed. Once all ports are clear, the system shuts down the voice mail system software program.
- To review and modify the TRANS.TXT file, you use an editor. To invoke the DOS editor, for example, from a DOS prompt, type EDIT TRANS.TXT and press [ENTER]. To exit the file once you have reviewed it, press [Alt+F] then press [X]. If you modified the file, you are prompted to save your changes. To save your changes press [ENTER] or [Y] at the prompt to save changes.
- To restart the system, type GOVM at the \VM directory prompt then press [ENTER].

The contents of the Trans.TXT file are as follows.

Default TRANS.TXT File Entries	
File Entry	**Reason for Entry**
a1b1czd0x = x*,*,#	Direct call (internal). Automatically logs in to caller's Mailbox
a1b2czd0x=	Direct call (external). Plays main greeting.
a2b1czd0x=x*,*,1,1	Transfer from operator (internal). Begins recording message for Mailbox.
a2b2czd0x=x*,*	Transfer from operator (external). Plays greeting for Mailbox, offering option to record.
a3byczd0x=x*,*,:g=2	Busy call forward. If greeting #2 has been recorded, VM will play it. Otherwise VM will play greeting the Mailbox default greeting.
a4byczd0x=x*,*,:g=1	No answer call forward. . If greeting #1 has been recorded, VM will play it. Otherwise VM will play greeting the Mailbox default greeting.
a5byczd0x =x*,*	Direct call forward. Plays default greeting for Mailbox.
a6byczd0x=x*,*,1,1:n	Record. Begins recording, without playing beep.
a7byczd0740= a7byczd0741= etc…	Individual trunk greeting
a8byczd0157=	Recall (from Hold / No ans). Plays default Mailbox greeting.
a8byczd0158=	
a8byczd0159=	
a8byczd0160=	
a8byczd0161=	
a8byczd0160=	
a8byczd0161=	
a8byczd0162=	
a8byczd0163=	
a8byczd0164=	
a8byczd0x=x*,*	
a9byd49=3301 a9byd50=3302 a9byd51=3303 a9byd52=3304 a9byd53=3305	UCD re-route for UCD groups 1-5. See section on UCD integration.
a9byd01=3101 a9byd02=3102 a9byd03=3103 a9byd04=3104 a9byd05=3105	UCD overflow 1 for UCD groups 1-5. See section on UCD integration.

a9byd25=3201 a9byd26=3202 a9byd27=3203 a9byd28=3204 a9byd29=3205	UCD overflow 2 for UCD groups 1-5. See section on UCD integration.
a9bydz=	UCD overflow for all other groups. See section on UCD integration.

Index

A

access to group boxes 75
access to p.a. 75
Adjusting Mailbox Information 94
Automatic Mailbox Login 40

B

Backing Up the System 33
Blind Transfer 43
Box Information Screens 79
Box Information Settings 122
Business Hours
  Setting up 72
Business Hours Worksheet 67

C

Call Forward No Answer 51
Call Queuing 44
Call Transfer
  Setting up 72
Call Transfer Types 43
Caller ID 41
Calling Your Mailbox 91
Class of Service
  Name 74
  Number 73
  Setting up 73
Communicating with the System 19

D

Default Database 63
delete new messages 75
delete old messages 74
digits allowed while holding 76
Direct Connection 20

E

Extension Port Type 46

F

Feature Comparison Matrix 39
Features 39
Four-Port Expansion Module 17

G

General Information
  Setting up 71
GETFILE 32

H

Host.INI 22

J

Jumper Settings 14

K

KeyLink 66
Keylink 19

L

LED Status 9
Line Information
  Setting up 72

M

max lines allowed to hold 76
maximum greeting length 74
maximum message length 74
maximum number of messages 74
Multilingual Capability 44

N

No Transfer 43
Null Modem Cable 30

O

operator box 76
Optional Features 44
Other Box Types 95

P

Personal Greeting 40
Phone System Programming 45
Programming
  Extension Port Type 46
  No Answer Call Forward 50
  PC-DBA
    Call Forward Modes 57
    Call Handling Digits 56
    CO Line Answering Position 61
    CO Line Ringing Modes 60
    Dialing Ratio 58
    Extension Port Type 52
    Forward Time 58
    UCD Group Members 54
  UCD Group Members 47
  using PC-DBA 52
  using the telephone 46
  VM Tables 47
  Voice Mail Hunt Group 47
Programming the DX80 46
Prototype Mailbox 9994 80

R

Recording a Call 41
Remote Connection 28
Restoring Files 36
Restoring Names, Greetings, and Messages 36
Restoring the Database and Setup Files 36
restricted numbers 77
Retrieving Messages 92
Routing Box 800 78
Routing Box Greetings 90
Routing Box Information 94
Routing Worksheet 70

S

Screen Transfer 43
SENDFILE 31
Serial Cable 15
Single Digit Call Routing 79
Software Requirement 9
Specifying Box Information 78
Subscriber Mailbox Worksheet 68
Subscriber Mailboxes 82
  Customizing 82
Subscriber Schedule Worksheet 69
supervisor status 75
System 71
System Information
  Accessing Screens 71
  Specifying 71
System Supervisor Mailbox 89

T

Teleparameter 93
  Adjusting System Info 93
  Table Values 95
Time/Day Announcements 44
TRANS.TXT File 124
Transfer to Voice Mail 41
Transferring a Call to a Mailbox 91

U

UCD Group Members 47
UCD Integration 41
Upgrading the Flash Card 18

V

VM Tables 47
VM.CFG File 123
VM.CFG Setup 115, 116, 117, 118, 119
Voice Mail Functions 5
Voice Mail Hunt Group 47

W

Wait for Answer Transfer 43
Wait for Ring Transfer 43